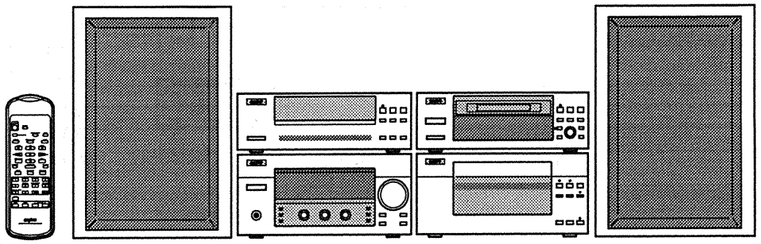
SANYO

FILE NO.

Service Manual

Separate Mini Component System

DC-007C (UK)
(XE)



PRODUCT CODE No.
129 569 00 (UK)
129 569 01 (XE)

Specifications

TUNER SECTION
Reception frequency ..... FM : 87.5 - 108 MHz
AM : 522 - 1,611 kHz
Output power ..... 50W x 2 (1kHz at 6 ohm, 10% distortion)
Inputs ..... VIDEO (AUDIO) : 500 mV/50k ohms
Outputs ..... SPEAKERS : 6 ohms
PHONES : 8 - 32 ohms
SUB WOOFER OUT : 10k ohms
Power requirements ..... AC 230V, 50 Hz
Power comsumption 130W
0.8W (Ecology On standby mode)
16W (Ecology Off standby mode)
Dimensions ..... 270 (W) x 122 (H) x 287 (D) mm
Weight ..... 5.3 kg

CD PLAYER SECTION
Type ..... Changer, 3-disc
Channels ..... 2-channel stereo
Sampling frequency ..... 44.1 kHz
Pick-up ..... Optical 3-beam semiconductor laser
Laser output ..... 0.6 mW (Continuous wave max.)
Wave length ..... 790 nm
Frequency response ..... 20 Hz to 20 kHz
Wow/flutter ..... Below measurable limits
Output ..... OPTICAL DIGITAL OUT : Optical
Output ..... OPTICAL DIGITAL OUT : Optical
Power supply ..... Supplied from the Tuner/Amplifier
Dimensions ..... 270 (W) x 87 (H) x 276 (D) mm
Weight ..... 2.3 kg

WIRESS REMOTE CONTROL
Power requirements ..... 2 "R6 (HP7)" batteries
Dimensions ..... Approx. 66(W) x 200(H) x 32(D)mm
Weight ..... Approx. 115g (without batteries)

SPEAKER SYSTEM
Type ..... 3 way bass reflex
Built-in magnetic stray field compensation
Unit used ..... Woofer : 15 cm cone type
Mid range : 8 cm cone type
Tweeter : 3.5 cm balance driver
Maximum power-handling capacity ..... 100W (peak)
Nominal impedance ..... 6 ohms
Dimensions ..... 230 (W) x 343 (H) x 253 (D) mm
Weight ..... 4.7 kg (per speaker)

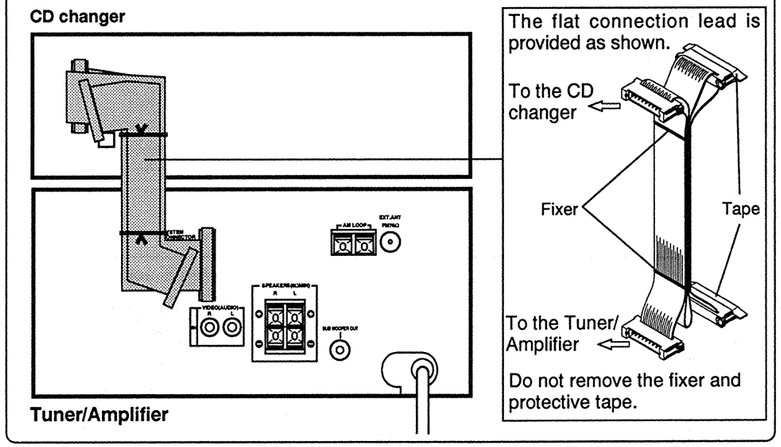
Specifications subject to change without notice.

This service manual consists of "JCX-007" (Tuner/Amplifier UK : 129 561 00, XE : 129 561 01), "DAD-CP-007" (CD Changer UK : 137 087 00, XE : 137 087 01), "RB-007" (Rmote control), "SX-007L" (Speaker system : 165 000 00) and "SX-007R" (Speaker system : 165 001 00).

REFERENCE No. SM5810033

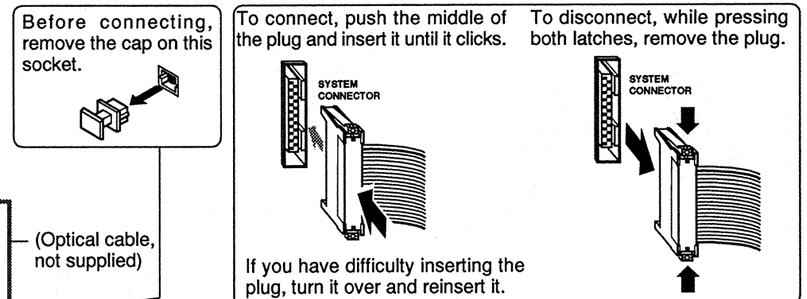
SYSTEM CONNECTIONS

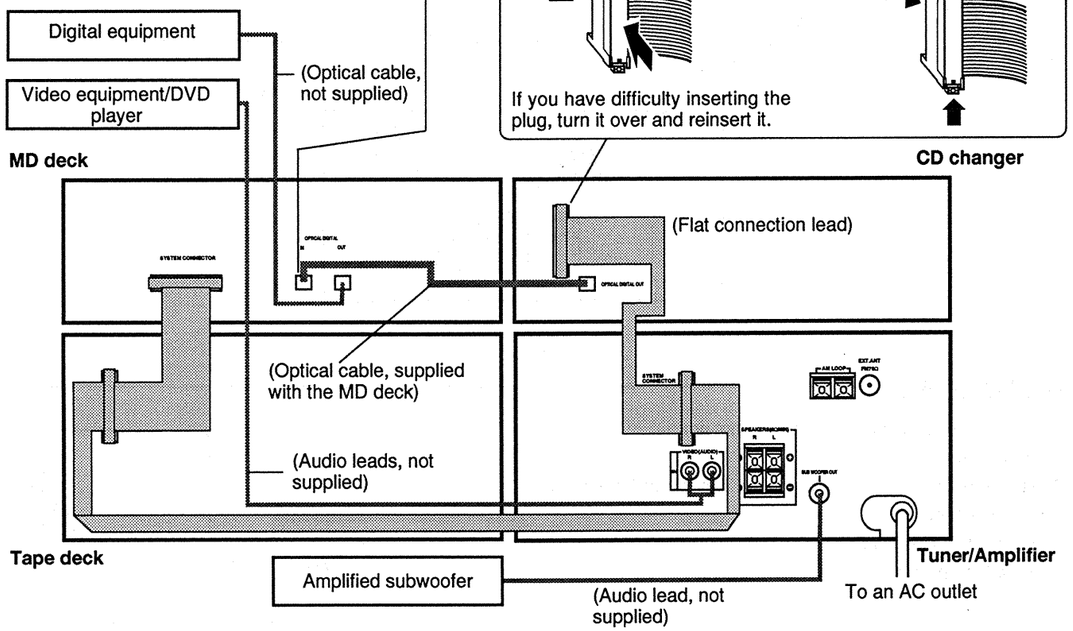
When using only the system DC-007C (CD changer and Tuner/Amplifier)



Notes on the flat connection lead
When using the system DC-007C (CD changer and Tuner/Amplifier) and optional Tape deck and/or MD deck, remove the fixer and protective tape before connecting.
- Do not remove the tape on the plug that is not used.

Note:
- **Do not connect the mains lead to an AC outlet until all connections have been made.**
- The system is not completely disconnected from the mains when the ⏻/ON button is set to the ⏻ position.
- To prevent a noise interference from the mains, the core clamp is attached to the mains lead. Do not remove it.

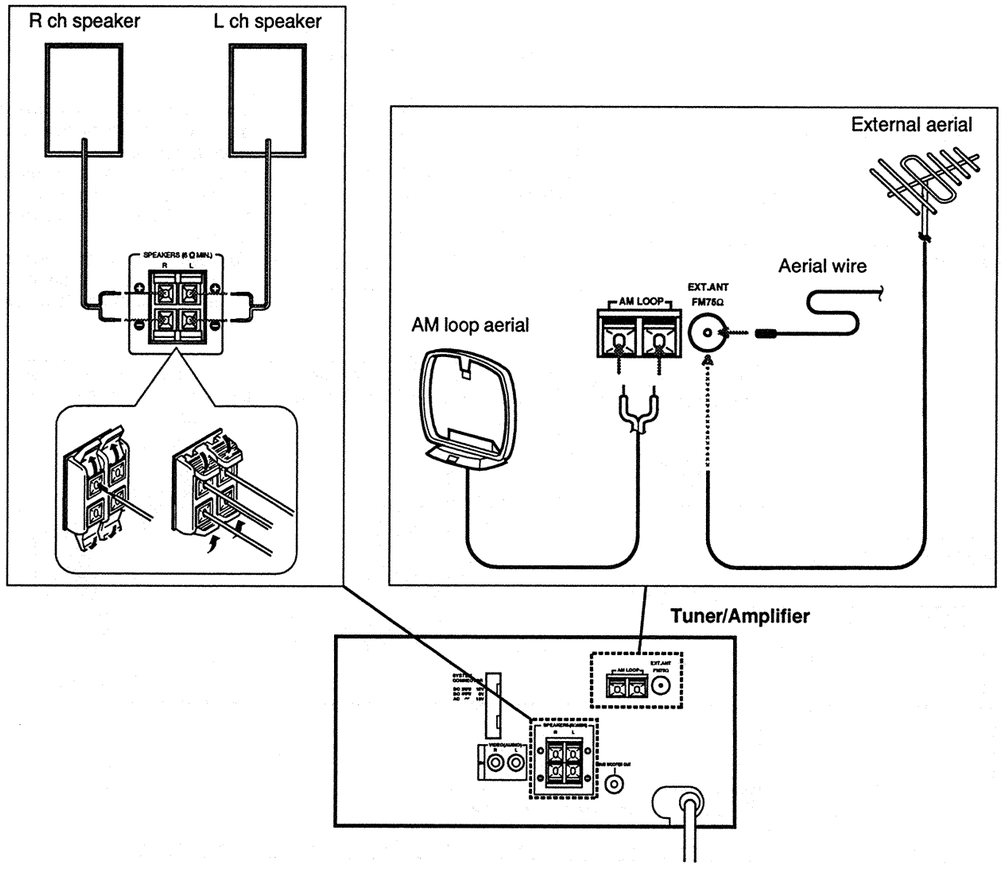

Before connecting, remove the cap on this socket.
To connect, push the middle of the plug and insert it until it clicks.
To disconnect, while pressing both latches, remove the plug.
SYSTEM CONNECTOR
SYSTEM CONNECTOR
If you have difficulty inserting the plug, turn it over and reinsert it.



SYSTEM CONNECTIONS

Speakers

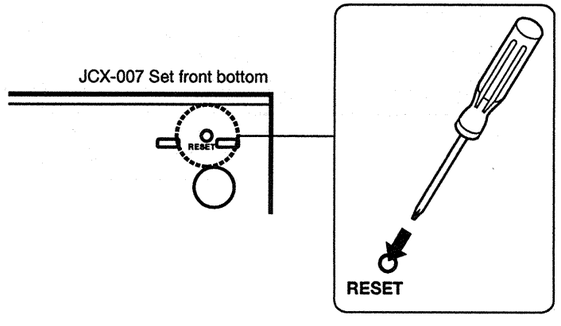
When connecting the speakers, make sure that (+) and (–) polarities are matched properly. Otherwise, the sound may appear to be lacking in the bass range and in stability.
Connect the speaker wire with the stripe to the red terminal (+) and the other wire to the black terminal (–).
Note:
If desired, the speaker grilles can be removed.



WHAT TO DO IF ....

If the operation of the system or display is not normal.

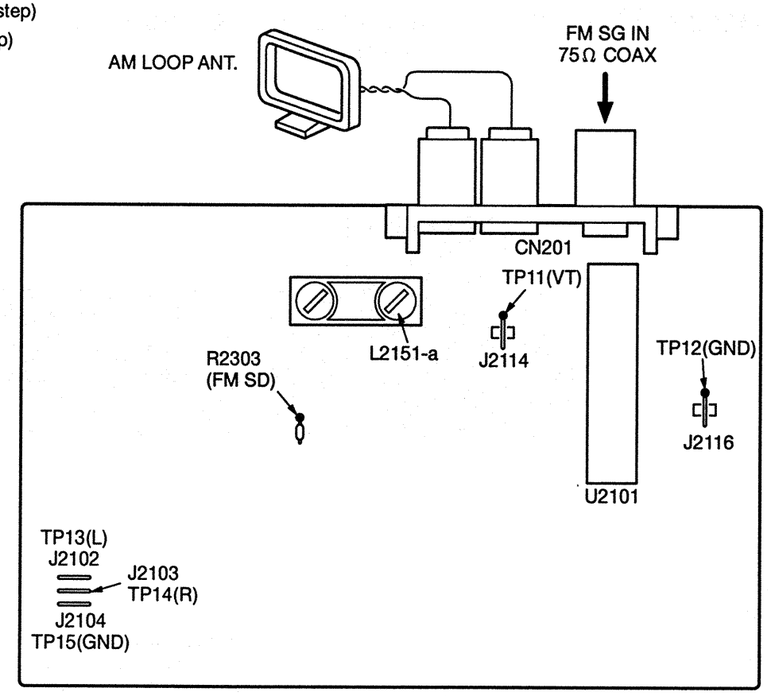
1. Disconnect the mains lead.
2. Press the **RESET** button (bottom of the Tuner/Amplifier) for at least 30 seconds.
3. Connect the mains lead.
4. Resume the operatrion.



TUNER / AMPLIFIER SECTION

TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 6 ohm
- TUNING
  FM : 87.5 - 108.0MHz (50kHz step)
  AM : 522 - 1611KHz (9kHz step)



SG RF Level : 75Ω open Voltage dBμV
Antenna : 75Ω unbalanced , Modulation : 1 kHz
Dev. : ±22.5kHz(MONO) ±22.5kHz(STEREO) ±6.75kHz(PILOT)

1. FM

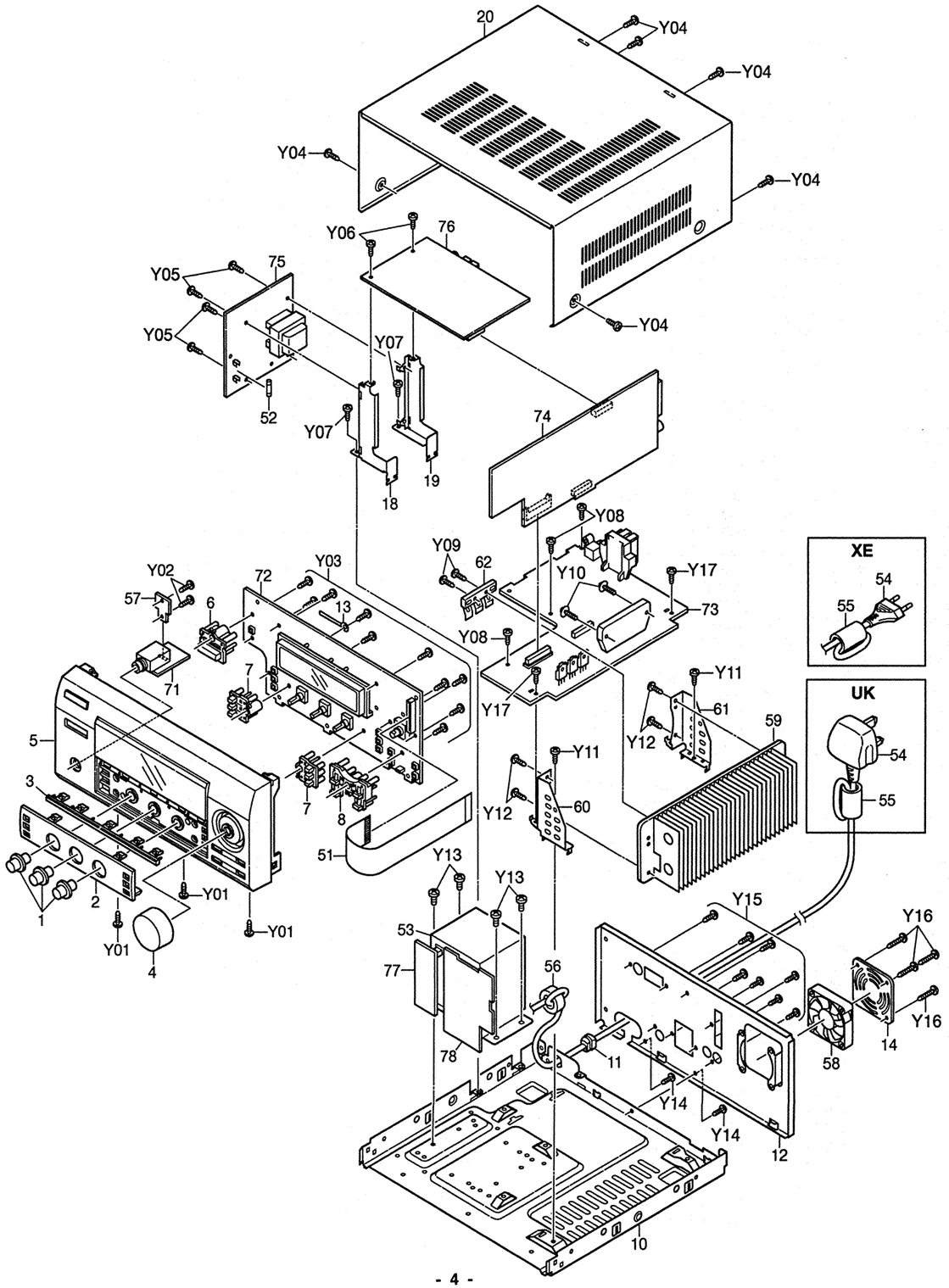
Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	Cover voltage	---	Connect Digital DC voltmeter to TP11(H), TP12(E).	87.5 MHZ	Low	---	more than 0.8V
		---		108.0 MHZ	High	---	less than 9.0V
2	Tracking	Connect FM SG to FM Antenna (SG=15dB μV)	Connect to VTVM TP13(L) or TP14(R), TP15(E)	90.0 MHZ	Low	---	S/N=30dB or more
				106.0MHZ	High	---	

SG Modulation : 1kHz, 30%
Antenna, IRE Loop, Distance : 60 cm

2. AM

Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	Cover voltage	---	Connect Digital DC voltmeter to TP11(H), TP12(E).	522 kHZ	Low	---	more than 0.8V
		---		1611kHZ	High	---	less than 9.0V
2	Tracking	Connect AM SG to Test loop Ant.(SG=80dB μV)	Connect to VTVM TP13(L) or TP14(R), TP15(E)	603 kHZ	Low	L2151-a	Max.
				1404 kHZ	High	---	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 µF type of Ceramic type and Electrical type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 302 5269	CARTON CASE,INNER SLEEVE
	614 302 0738	CUSHION,FRONT,FRONT
	614 302 0745	CUSHION,BACK,BACK
	645 036 4358	POLY SHEET-0850X0500*NC,SET (UK)
	645 036 4365	POLY SHEET-0850X0500*NC,SET (XE)
	645 033 8144	REMOCON, RB-007
	645 036 6734	BATTERY COVER,SERVICE PARTS
	645 005 1227	ASSY,ANTENA, LOOP
	614 229 4635	ANT
	645 037 7440	ASSY,CABLE,SYSTEM,19P
	614 302 5306	INSTRUCTION MANUAL (UK)
	614 303 9822	INSTRUCTION MANUAL (XE)
	614 307 0603	INSTRUCTION MANUAL,GREEK (XE)

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 302 0578	KNOB,ROTARY, BASS/TREBLE/UP DOWN
2	614 302 0493	DEC,PANEL,FRONT CENTER
3	614 302 0486	DEC,ESCUTCHEON,FRONT CENTER
4	614 302 0561	KNOB,ROTARY,VOLUME
5	614 302 0806	ASSY,CABINET,FRONT
6	614 302 0301	BUTTON,POWER,POWER
7	614 302 0318	BUTTON,TUNER,TUNER/FUNCTION
8	614 302 0332	BUTTON,CLOCK,CLOCK/TIMER
10	614 302 4781	ASSY,CABINET,BOTTOM
11	614 129 1901	FIXER,AC CORD
or	614 284 1884	FIXER,AC CORD
12	614 292 7236	PANEL,REAR,REAR
13	614 129 9136	LUG,FOR CN402
14	614 305 2661	COVER,FAN,FAN COVER
18	614 302 5122	MOUNTING,PWB,SUB TRANS PWB L
19	614 302 5139	MOUNTING,PWB,SUB TRANS PWB R
20	614 304 7810	ASSY,CABINET,AFTER BENDING

SPEAKER BOX ASSY (SX-007L,R)

REF.NO.	PART NO.	DESCRIPTION
	645 036 4341	POLY SHEET-0750X0400*NC,SET (UK)
	614 304 7773	ASSY,BOX,SPEAKER ,L(UK)
	614 304 7797	ASSY,BOX,SPEAKER ,L (XE)
	614 304 7780	ASSY,BOX,SPEAKER ,R(UK)
	614 304 7803	ASSY,BOX,SPEAKER ,R (XE)
	614 304 5281	ASSY,GRILLE

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 021 3503	SCR S-TPG BIN 3X10, FRONT-BOTTOM FIX
Y02	411 021 3503	SCR S-TPG BIN 3X10, HEAD PHONE FIX
Y03	411 021 3503	SCR S-TPG BIN 3X10,FRONT PWB FIX
Y04	411 021 3701	SCR S-TPG BIN 3X10,CABINET
Y05	411 021 3503	SCR S-TPG BIN 3X10, SUB TRANS PWB
Y06	411 021 3503	SCR S-TPG BIN 3X10,TUNER PWB
Y07	411 021 3503	SCR S-TPG BIN 3X10,MOUNTING PWB
Y08	411 021 3503	SCR S-TPG BIN 3X10,MAIN PWB
Y09	411 021 3503	SCR S-TPG BIN 3X10, MOUNTING HEAT SINK
Y10	411 020 9506	SCR S-TPG BRZ+FLG 3X16,HEATSINK-POWER IC
Y11	411 021 3503	SCR S-TPG BIN 3X10,HEATSINK-REG
Y12	411 021 3503	SCR S-TPG BIN 3X10, MOUNTING HS-HEATSINK
Y13	411 001 3905	SCR S-TPG BIN 4X6,TRANS
Y14	411 021 3701	SCR S-TPG BIN 3X10,BOTTOM-REAR
Y15	411 021 3701	SCR S-TPG BIN 3X10, REAR-ELECT PARTS
Y16	411 021 4609	SCR S-TPG BIN 3X16,FAN-REAR FIX
Y17	411 021 3503	SCR S-TPG BIN 3X10, MOUNTING HS-PWB

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	645 036 4310	FLEXIBLE FLAT CABLE
52	⚠ 423 017 0007	FUSE 250V 1A,PRIMARY FUSE
53	⚠ 645 033 6690	TRANS,POWER,MAIN PT
54	⚠ 645 036 9797	CORD,POWER-1.6MK (UK)
or	⚠ 645 036 9803	CORD,POWER-1.6MK (UK)
or	⚠ 645 008 9732	CORD,POWER-1.8MK (UK)
or	⚠ 645 033 7543	CORD,POWER-1.6MK (UK)
54	614 255 2513	POWER CORD (XE)
or	645 016 9939	CORD POWER-1.74MK (XE)
55	645 037 3060	CORE,CLAMP,LINE NOISE
56	645 013 6498	CORE,FERRITE,AC EMC
57	⚠ 614 303 7767	PWB,FIXING
58	645 036 6239	MOTOR,FAN DC 0.84W
59	614 303 3899	ASSY,HEAT SINK
60	614 278 8240	MOUNTING,HEAT SINK, FOR-HEATSINK
61	614 278 8233	MOUNTING,HEAT SINK, FOR-HEATSINK
62	614 291 6568	MOUNTING,PWB,FOR-REG

HEADPHONE P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 302 3364	ASSY,PWB,HEADPHONE (Only Initial)
CN400	645 009 0042	JACK,PHONE D6.43
CN401	614 035 4935	SOCKET,DIP 4P
or	614 237 9776	SOCKET
CN402	614 294 0761	ASSY,WIRE,HEADPHONE-MAIN
L4000	645 001 4550	INDUCTOR,10U K
or	645 031 7835	INDUCTOR,10U K
L4010	645 001 4550	INDUCTOR,10U K
or	645 031 7835	INDUCTOR,10U K

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 301 3990	ASSY,PWB,FRONT (Only Initial)
BR601	614 291 6520	HOLDER,MOUNT,FL_MOUNT
C6093	403 304 4802	DL-ELECT 0.047F Z 5.5V
or	403 262 8607	DL-ELECT 0.047F Z 5.5V
CN601	645 012 5300	SOCKET,FPC 26P,FRONT-MAIN
D6001	407 012 4406	DIODE 1SS133
D6002	407 099 4603	ZENER DIODE MTZJ3.9B
D6012	407 012 4406	DIODE 1SS133
D6091	407 012 4406	DIODE 1SS133
DS601	408 039 8507	PHOTO DIODE PIC-28043TE3,IR
FL601	645 032 8961	FLOURESCENT TUBE,FL
IC601	410 344 9308	IC M38B57M6-129FP
L6091	645 001 4550	INDUCTOR,10U K
or	645 031 7835	INDUCTOR,10U K
Q6001	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q6002	405 143 6504	TR KTA1267-GR
or	405 004 4601	TR 2SA608-F-SPA
or	405 004 5103	TR 2SA608-G-SPA
or	405 006 1806	TR 2SA933S-R
or	405 006 1905	TR 2SA933S-S
Q6003	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
or	405 006 3909	TR 2SA952-K
or	405 006 4005	TR 2SA952-L
Q6004	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q6005	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q6006	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q6007	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
or	405 006 3909	TR 2SA952-K
or	405 006 4005	TR 2SA952-L
S6001	645 033 7673	SWITCH,ROTARY(ENCODER)
S6002	645 033 7680	SWITCH,ROTARY(ENCODER)
S6003	645 033 7680	SWITCH,ROTARY(ENCODER)
S6004	645 033 7680	SWITCH,ROTARY(ENCODER)
S6091	645 035 9224	SWITCH,PUSH 1P-1T
or	645 000 1383	SWITCH,PUSH 1P-1TX1
S6101	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6102	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6103	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6104	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6106	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6107	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6109	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6110	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6111	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6112	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6113	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
TA601	614 112 1451	DOUBLE FACE,FL_MOUNT
X6001	645 032 1627	OSC,CRYSTAL 32.768KHZ,XTAL
X6002	614 215 5561	RESONATOR,CERAM
or	645 013 7532	OSC,CERAMIC 4.19MHZ

MAIN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 302 2015	ASSY,PWB,MAIN,MAIN (Only Initial)
C4706	403 057 2407	POLYESTER 0.1U J 50V
C4707	403 057 2407	POLYESTER 0.1U J 50V
C4806	403 057 2407	POLYESTER 0.1U J 50V
C4807	403 057 2407	POLYESTER 0.1U J 50V
C4900	403 332 7400	ELECT 2200U M 50V
C4901	403 332 7400	ELECT 2200U M 50V
C4930	403 329 5907	ELECT 3300U M 25V
C4931	403 277 4106	ELECT 1000U M 25V
CN470	645 033 3088	TERMINAL
CN471	645 033 3057	JACK,RCA
CN472	645 005 8110	PLUG,4P
or	645 007 0075	PLUG,4P
CN473	645 026 8960	PLUG,12P
CN474	645 005 8615	SOCKET,12P
CN490	614 020 1222	SOCKET,3P
CN493	614 035 4959	SOCKET,DIP 6P
D4410	407 012 4406	DIODE 1SS133
D4411	407 012 4406	DIODE 1SS133
D4412	407 012 4406	DIODE 1SS133
D4440	407 012 4208	DIODE 1SS131
D4770	407 012 4406	DIODE 1SS133
D4771	407 012 4208	DIODE 1SS131
D4900	⚠ 407 196 5800	DIODE 1N5402BD82
D4901	⚠ 407 196 5800	DIODE 1N5402BD82
D4902	⚠ 407 196 5800	DIODE 1N5402BD82
D4903	⚠ 407 196 5800	DIODE 1N5402BD82
D4930	⚠ 407 107 6001	DIODE RL203-BD80
or	⚠ 407 210 7902	DIODE RL203-BD81
D4931	⚠ 407 107 6001	DIODE RL203-BD80
or	⚠ 407 210 7902	DIODE RL203-BD81
D4932	⚠ 407 107 6001	DIODE RL203-BD80
or	⚠ 407 210 7902	DIODE RL203-BD81
D4933	⚠ 407 107 6001	DIODE RL203-BD80
or	⚠ 407 210 7902	DIODE RL203-BD81
D4934	407 099 5402	ZENER DIODE MTZJ6.2B
D4935	407 099 6805	ZENER DIODE MTZJ13B
D4936	407 099 6805	ZENER DIODE MTZJ13B
D4937	407 099 4603	ZENER DIODE MTZJ3.9B
D4940	⚠ 407 148 6701	DIODE 1A3-I
D4960	407 099 6805	ZENER DIODE MTZJ13B
IC470	⚠ 409 437 7109	IC STK407-050E
IC471	409 426 1804	IC KIA4558S
L4700	614 202 1712	V.H.F COIL 1AV4L20B0320N
or	614 196 9763	V.H.F COIL
L4800	614 202 1712	V.H.F COIL 1AV4L20B0320N
or	614 196 9763	V.H.F COIL
LG470	645 023 8987	FIXER
LG471	645 023 8987	FIXER
Q4410	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4420	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4421	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4430	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4431	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4435	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
Q4436	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4437	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4438	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4441	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4700	405 033 6805	TR 2SD1468S-S
or	405 033 6706	TR 2SD1468S-R
or	405 151 4400	TR KTD1303
Q4800	405 033 6805	TR 2SD1468S-S
or	405 033 6706	TR 2SD1468S-R
or	405 151 4400	TR KTD1303
Q4930	⚠ 405 001 9302	TR 2SA1020-Y
Q4931	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
Q4932	⚠ 405 095 1602	TR 2SD2061-E
or	⚠ 405 095 1701	TR 2SD2061-F
or	⚠ 405 138 6403	TR KTD2058Y
Q4933	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4934	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4935	⚠ 405 095 1602	TR 2SD2061-E
or	⚠ 405 095 1701	TR 2SD2061-F
or	⚠ 405 138 6403	TR KTD2058Y
Q4960	⚠ 405 095 1602	TR 2SD2061-E
or	⚠ 405 095 1701	TR 2SD2061-F
or	⚠ 405 138 6403	TR KTD2058Y
Q4961	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4962	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
R4430	⚠ 614 242 0126	RESISTOR 0.22 K- 3W
R4431	⚠ 614 242 0126	RESISTOR 0.22 K- 3W
R4706	⚠ 402 082 1300	RESISTOR 4.7 J- 1W
R4707	⚠ 402 082 1300	RESISTOR 4.7 J- 1W
R4790	⚠ 402 082 1201	RESISTOR 330 J- 1W
R4806	⚠ 402 082 1300	RESISTOR 4.7 J- 1W

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
R4807	⚠ 402 082 1300	RESISTOR 4.7 J- 1W
R4890	⚠ 402 082 1201	RESISTOR 330 J- 1W
R4902	⚠ 402 081 1103	FUSIBLE RES 100 JA 1/4W
R4903	⚠ 402 081 1103	FUSIBLE RES 100 JA 1/4W
R4930	⚠ 402 082 1102	FUSIBLE RES 22 JA 1/2W
R4931	⚠ 402 081 1004	FUSIBLE RES 10 JA 1/4W
R4938	⚠ 402 082 5209	RESISTOR 1 J- 1/2W
R4962	⚠ 402 082 5209	RESISTOR 1 J- 1/2W
RY441	614 224 4531	RELAY
or	645 035 6582	RELAY

PREAMP P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 302 2022	ASSY,PWB,PREAMP (Only Initial)
C4581	403 057 2407	POLYESTER 0.1U J 50V
C4585	403 062 0009	POLYESTER 0.047U J 50V
C4681	403 057 2407	POLYESTER 0.1U J 50V
C4685	403 062 0009	POLYESTER 0.047U J 50V
CN450	645 012 6369	JACK,RCA-2
CN451	614 239 5455	SOCKET
CN452	645 033 7826	PLUG,11P
CN453	645 012 5300	SOCKET,FPC 26P
CN454	645 026 8977	SOCKET,12P
CN455	645 005 8370	PLUG,12P
CN456	614 035 4928	SOCKET,DIP 3P
or	614 237 9769	SOCKET
CN457	614 297 6395	CORD,3P CONNECTOR, PREAMP-SUBPT
CN458	645 004 2881	PLUG,2P
CN459	645 005 7366	PLUG,2P
or	645 007 0051	PLUG,2P
D4300	⚠ 407 148 6701	DIODE 1A3-I
D4301	407 012 4406	DIODE 1SS133
D4302	407 012 4406	DIODE 1SS133
D4303	407 012 4406	DIODE 1SS133
D4305	⚠ 407 148 6701	DIODE 1A3-I
D4471	407 012 4406	DIODE 1SS133
D4472	407 099 4603	ZENER DIODE MTZJ3.9B
D4590	407 099 6102	ZENER DIODE MTZJ10B
IC456	409 426 1804	IC KIA4558S
IC458	409 431 2506	IC LC75385NE-R
Q4300	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4470	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
Q4471	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
Q4480	⚠ 405 023 5306	TR 2SD400-F-MP
Q4481	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4482	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4560	405 073 6407	TR 2SK772-E
Q4561	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4575	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4576	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 005 2002	TR 2SA733-P
or	405 005 1906	TR 2SA733-K
Q4577	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4660	405 073 6407	TR 2SK772-E
Q4661	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
R4584	X402 081 9208	FUSIBLE RES 33 J- 1/4W

SUB POWER TRANSFORMER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 302 2053	ASSY,PWB,SUB-PT (Only Initial)
C4974	⚠ 404 000 1607	CERAMIC 0.01U F 400V
or	⚠ 403 349 3303	CERAMIC 0.01U M 250V
C4975	403 313 4602	ELECT 1000U M 16V
CN440	645 005 7373	PLUG,3P
or	645 007 0068	PLUG,3P
D4400	407 012 4406	DIODE 1SS133
D4401	407 099 5402	ZENER DIODE MTZJ6.2B
D4970	⚠ 407 148 6701	DIODE 1A3-I
D4971	⚠ 407 148 6701	DIODE 1A3-I
D4972	⚠ 407 148 6701	DIODE 1A3-I
D4973	⚠ 407 148 6701	DIODE 1A3-I
FPC01	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
FPC02	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
L4970	⚠ 614 234 2800	INDUCTOR,FERITE
PT497	⚠ 645 033 8595	TRANS,POWER
Q4400	405 141 3208	TR KTC3198-Y
or	405 143 8706	TR KTC3199-GR
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
Q4401	⚠ 405 023 5306	TR 2SD400-F-MP
RY440	⚠ 645 030 5597	RELAY
or	⚠ 645 035 6575	RELAY
WR435	614 017 8203	TERMINAL BOARD
WR436	614 017 8203	TERMINAL BOARD

TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 301 3976	ASSY,PWB,TUNER (Only Initial)
C2457	403 259 0508	NP-ELECT 1U M 50V
CN201	614 255 5750	TERMINAL
or	645 032 6394	TERMINAL
CN241	645 033 7833	SOCKET,11P
CN251	614 239 1839	TERMINAL
D2151	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
D2451	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2452	407 153 7502	ZENER DIODE GZS3.0B
D2466	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
D2467	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
or	407 153 6109	DIODE 1SS119-041
IC231	409 379 2705	IC LA1832ML
IC241	409 439 4502	IC LC72121M-D
IC251	409 415 8609	IC LC72720N
L2151	645 023 0127	TUNER
L2451	645 001 4581	INDUCTOR,100U K
or	645 031 7842	INDUCTOR,100U K
L2501	645 001 4581	INDUCTOR,100U K
or	645 031 7842	INDUCTOR,100U K
L2502	645 001 4581	INDUCTOR,100U K
or	645 031 7842	INDUCTOR,100U K
Q2140	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2201	405 151 4202	TR KTC3193-O
or	405 151 4103	TR KTC3193-Y
or	405 016 0806	TR 2SC2839-E
Q2310	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2451	405 151 5209	TR KRA107M
or	405 000 0904	TR DTA114YS
or	405 078 2404	TR BN1A4P
or	405 036 3702	TR 2SA1564
Q2501	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2502	405 151 5209	TR KRA107M
or	405 000 0904	TR DTA114YS
or	405 078 2404	TR BN1A4P
or	405 036 3702	TR 2SA1564
Q2701	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
Q2801	405 143 8706	TR KTC3199-GR
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
T2301	614 255 8119	FILTER,LC
U2101	645 033 5327	TUNER,FM
X2301	645 010 0024	OSC,CERAMIC 456KHZ
or	614 246 0870	RESONATOR
X2451	645 023 4965	OSC,CRYSTAL 7.2MHZ
X2501	645 035 8326	OSC,CRYSTAL 4.332MHZ
XF221	614 240 2917	FILTER,CERAM
or	645 010 0079	CERAMIC FILTER 10.70MHZ
or	614 254 3214	FILTER
XF222	614 240 2917	FILTER,CERAM
or	645 010 0079	CERAMIC FILTER 10.70MHZ
or	614 254 3214	FILTER
XF231	614 246 0849	FILTER
XF233	645 018 8824	DISCR,CERAMIC
or	645 018 8718	DISCR,CERAMIC

POWER TRANSFORMER, PRIMARY P.W.BOARD ASSY

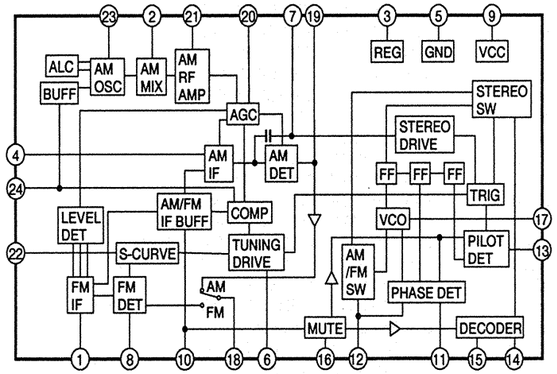
REF.NO.	PART NO.	DESCRIPTION
77	614 302 2039	ASSY,PWB,PT1 (Only Initial)

POWER TRANSFORMER, SECONDARY P.W.BOARD ASSY

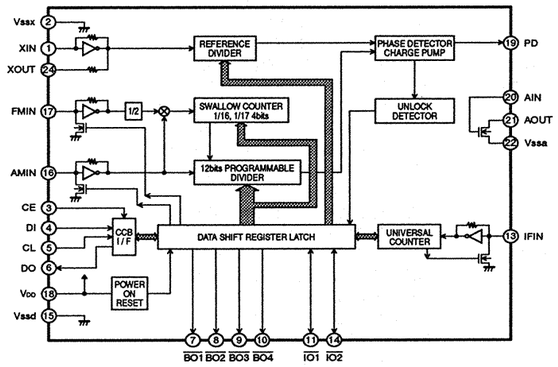
REF.NO.	PART NO.	DESCRIPTION
78	614 302 2046	ASSY,PWB,PT2,PT2 (Only Initial)
CN900	614 020 1222	SOCKET,3P
CN901	614 035 4959	SOCKET,DIP 6P
CN902	614 035 4911	SOCKET,DIP 2P
or	614 237 9752	SOCKET
CN903	614 298 7407	ASSY,WIRE,PT2-PREAMP
D4950	407 012 4208	DIODE 1SS131
D4951	407 012 4208	DIODE 1SS131
D4952	407 099 9905	ZENER DIODE MTZJ33B
D4953	407 099 5204	ZENER DIODE MTZJ5.1B
D4954	407 012 4208	DIODE 1SS131
D4955	407 012 4208	DIODE 1SS131
PR495	⚠ 645 027 4169	PROTECTOR,0.125A 125V
PR900	⚠ 645 014 2611	PROTECTOR,5A 125V
PR901	⚠ 645 014 2611	PROTECTOR,5A 125V
PR902	⚠ 645 014 2611	PROTECTOR,5A 125V
Q4950	⚠ 405 001 9302	TR 2SA1020-Y
R4954	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W

IC BLOCK DIAGRAM & DESCRIPTION

IC231 LA1832ML (AM/FM IF Amplifier & FM-MPX)

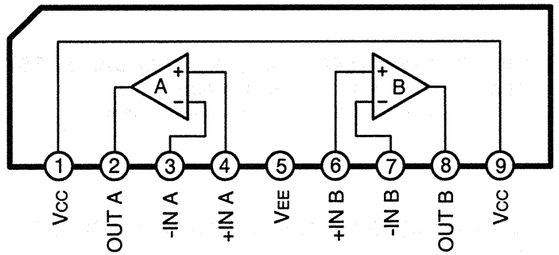


IC241 LC72121M (PLL Synthesizer)



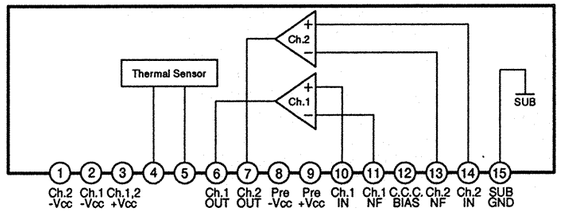
IC456,471 KIA4558S

(Dual Low Noise Operational Amplifier)

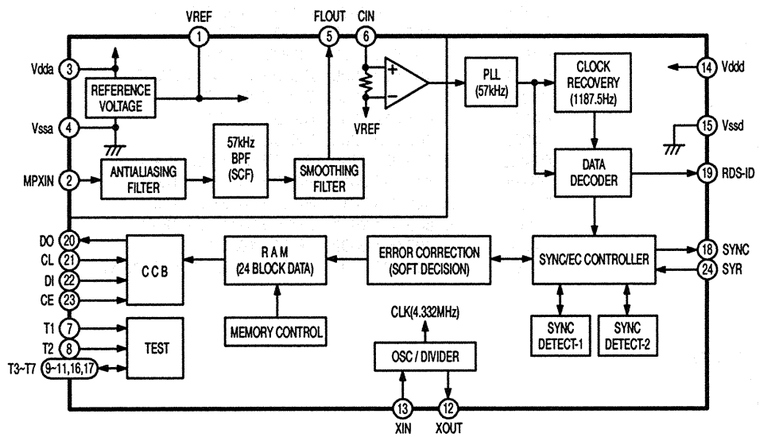


IC470 STK407-050E

(2-ch Stereo Audio Power Amplifier)

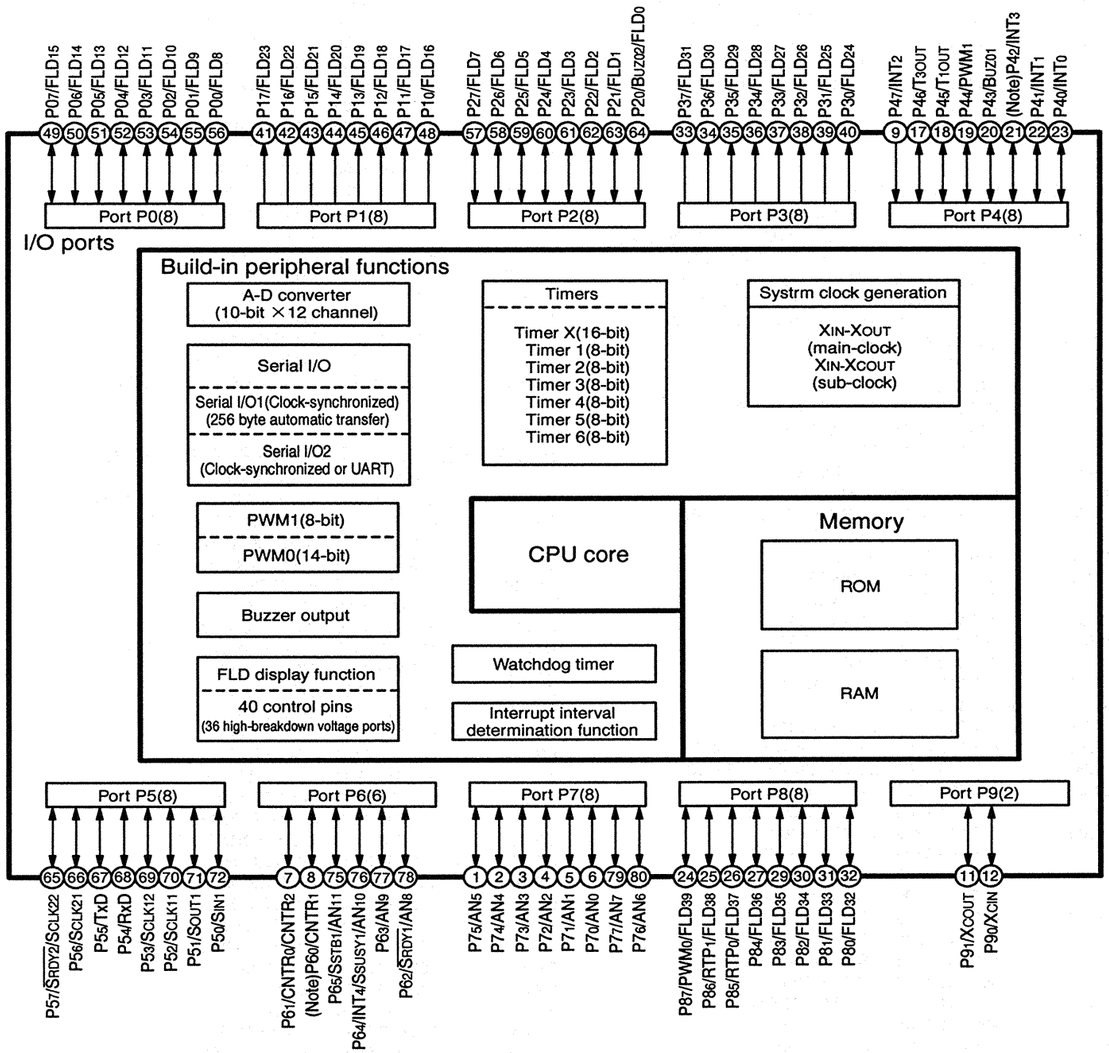


IC251 LC72720N (RDS Signal Processor)



IC BLOCK DIAGRAM & DESCRIPTION

IC601 M38B57M6-129FP (8-bit Microcomputer)



IC BLOCK DIAGRAM & DESCRIPTION

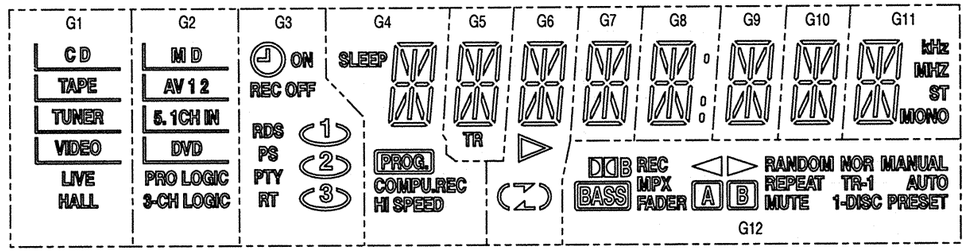
IC601 M38B57M6-129FP (8-bit Microcomputer)

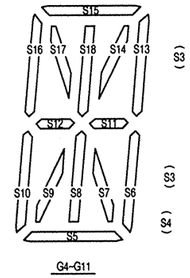
Pin	Name	Function
1	P75/AN5	8-bit CMOS I/O port with the same function as port P0. CMOS compatible input level. CMOS 3-state output structure.
2	P74/AN4	
3	P73/AN3	
4	P72/AN2	
5	P71/AN1	
6	P70/AN0	
7	P61/CNTR0 /CNTR2	5-bit CMOS I/O port with the same function as port P0. CMOS compatible input level. CMOS 3-state output structure.
8	P60/CNTR1	1-bit I/O port with the same function as port P0. CMOS compatible input level. N-channel open-drain output structure.
9	P47/INT2	1-bit input port. CMOS compatible input level.
10	RESET	Reset input pin for active "L".
11	P91/XCOUT	2-bit CMOS I/O port with the same function as port P0. CMOS compatible input level. CMOS 3-state output structure.
12	P91/XCIN	
13	VSS	Apply voltage of 4.0 - 5.5V to VCC, and 0V to VSS.
14	XIN	Input and output pins for the main clock generating circuit. Feedback resistor is built in between XIN pin and XOUT pin.
15	XOUT	When an external clock used, connect the clock source to the XIN pin and leave the XOUT pin open. The clock is used as the oscillting source of system clock.
16	VCC	Apply voltage of 4.0 - 5.5V to VCC, and 0V to VSS.
17	P45/T1OUT	
18	P45/T3OUT	
19	P44/PWM1	7-bit I/O port with the same function as port P0. CMOS compatible input level. N-channel open-drain output structure.
20	P43/BUZ01	
21	P42/INT3	
22	P41/INT1	
23	P40/INT0	
24	P87/PWM0/ FLD39	4-bit CMOS I/O port with the same function as port P0. Low-voltage input level. CMOS 3-state output structure.
25	P86/RTP1/F LD38	
26	P85/RTP0/F LD37	
27	P84/FLD36	
28	VEE	Apply voltage supplied to pull-down resistors of ports P0, P1 and P3.
29	P83/FLD35	4-bit I/O port with the same function as port P0. Low-voltage input level. High-breakdown-voltage P-channel open-drain output structure.
30	P82/FLD34	
31	P81/FLD33	
32	P80/FLD32	
33	P37/FLD31	8-bit output port. A pull-down resistor is built in between port P3 and the VEE pin.
34	P36/FLD30	
35	P35/FLD29	
36	P34/FLD28	
37	P33/FLD27	High-breakdown-voltage P-channel open-drain output structure. At reset, this port is set to VEE level.
38	P32/FLD26	
39	P31/FLD25	
40	P30/FLD24	
41	P17/FLD23	8-bit output port. A pull-down resistor is built in between port P1 and VEE pin. High-breakdown-voltage P-channel open-drain output structure. At reset, this port is set to VEE level.
42	P16/FLD22	
43	P15/FLD21	
44	P14/FLD20	
45	P13/FLD19	
46	P12/FLD18	
47	P11/FLD17	
48	P10/FLD16	
49	P07/FLD15	
50	P06/FLD14	
51	P05/FLD13	
52	P04/FLD12	
53	P03/FLD11	
54	P02/FLD10	
55	P01/FLD9	
56	P00/FLD8	
57	P27/FLD7	8-bit I/O port with the same function as port P0. Low-voltage input level. High-breakedown-voltage P-channel open-drain outpt structure.
58	P26/FLD6	
59	P25/FLD5	
60	P24/FLD4	
61	P23/FLD3	
62	P22/FLD2	
63	P21/FLD1	
64	P20/BUZ02/F LD0	
65	P57/SRDY2/ SCLK22	8-bit CMOS I/O port with the same function as port P0. CMOS 3-state output structure. CMOS compatible input level.
66	P56/SCLK21	
67	P55/TXD	
68	P54/RXD	
69	P53/SCLK12	
70	P52/SCLK11	
71	P51/SOUT1	
72	P50/SIN1	
73	AVSS	Analog power source input pin for A-D converter. Connect to Vss
74	VREF	Reference voltage input pin for A-D converter.
75	P65/SSTB1/ AN11	5-bit CMOS I/O port with the same function as port P0. CMOS compatible input level. CMOS 3-state output structure.
76	P64/INT4/S BUSY1/AN10	
77	P63/AN9	
78	P62/SRDY1/ AN8	
79	P77/AN7	8-bit CMOS I/O port with the same function as port P0. CMOS compatible input level. CMOS 3-state output structure.
80	P76/AN6	

FL DISPLAY DESCRIPTION

TYPE : CM1841M

ANODE & GRID ASSIGNMENT





ANODE & GRID ASSIGNMENT

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
S1	CD	MD	ON	SLEEP		)					MONO	PRESET
S2	(CD)	(MD)	◔	HI SPEED		(					ST	1-DISC
S3	TAPE	(AV1) 2	REC	COMPU.REC		TR		S3			MHz	MUTE
S4				PROG	TR	▷		S4			KHz	FADER
S5				S5	S5	S5	S5	S5	S5	S5	S5	DOLBY
S6			↻ (3)	S6	S6	S6	S6	S6	S6	S6	S6	REC
S7			RT	S7	S7	S7	S7	S7	S7	S7	S7	BASS
S8			3	S8	S8	S8	S8	S8	S8	S8	S8	MPX
S9			PTY	S9	S9	S9	S9	S9	S9	S9	S9	NOR
S10		3-CH LOGIC	↻ (2)	S10	S10	S10	S10	S10	S10	S10	S10	RANDOM
S11		PRO LOGIC	PS	S11	S11	S11	S11	S11	S11	S11	S11	◁
S12	HALL	(DVD)	2	S12	S12	S12	S12	S12	S12	S12	S12	▷
S13	LIVE	DVD	RDS	S13	S13	S13	S13	S13	S13	S13	S13	MANUAL
S14	(VIDEO)	(5.1CH IN)	↻ (1)	S14	S14	S14	S14	S14	S14	S14	S14	A
S15	(TAPE)	(AV) 1 (2)	OFF	S15	S15	S15	S15	S15	S15	S15	S15	AUTO
S16	TUNER	AV (12)		S16	S16	S16	S16	S16	S16	S16	S16	TR-1
S17	(TUNER)	(AV12)	1	S17	S17	S17	S17	S17	S17	S17	S17	REPEAT
S18	VIDEO	5.1CH IN		S18	S18	S18	S18	S18	S18	S18	S18	B

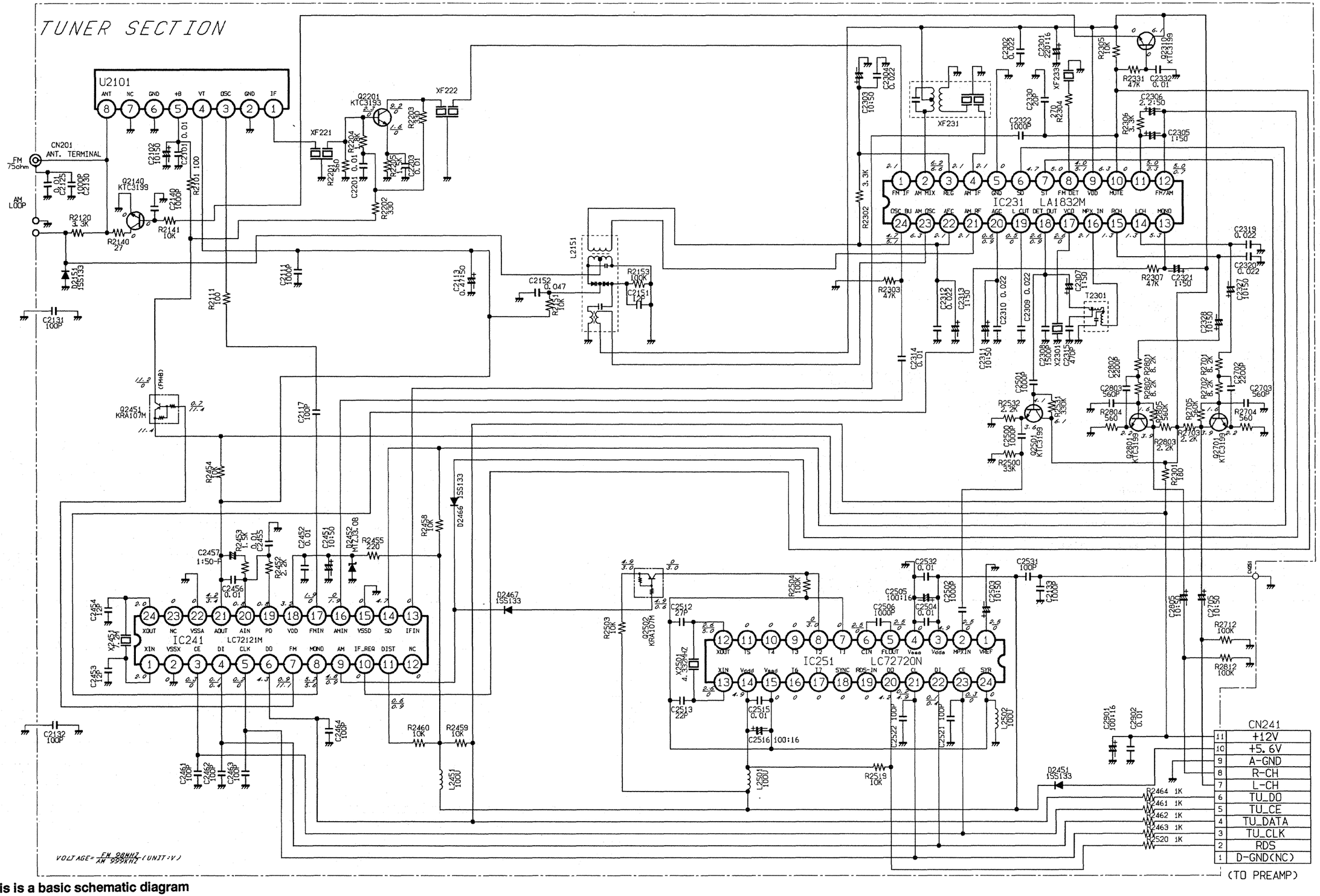
PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Assignment	F1	F1	NP	NL	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3

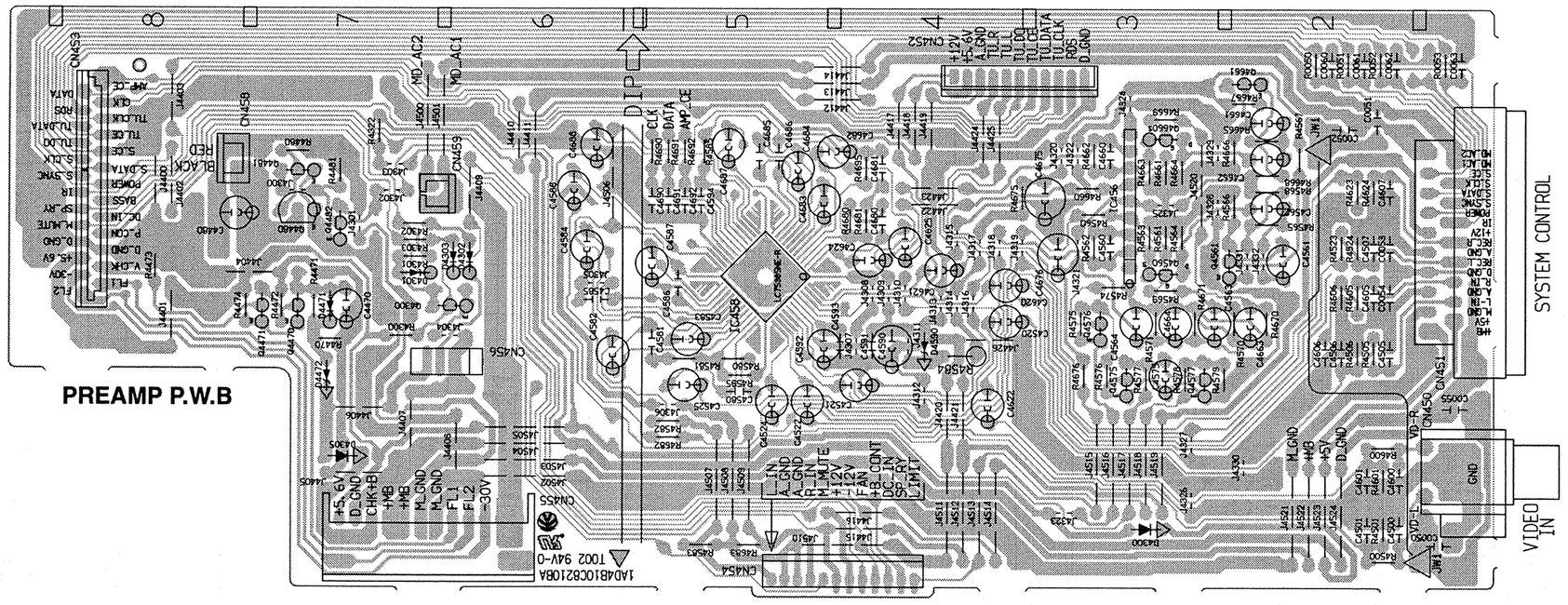
Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Assignment	S2	S1	NL	NL	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	NL	NP	F2	F2

F1,F2:Filament G1~G12:Grid S1~S18:Anode NP:No Pin NL:No Lead

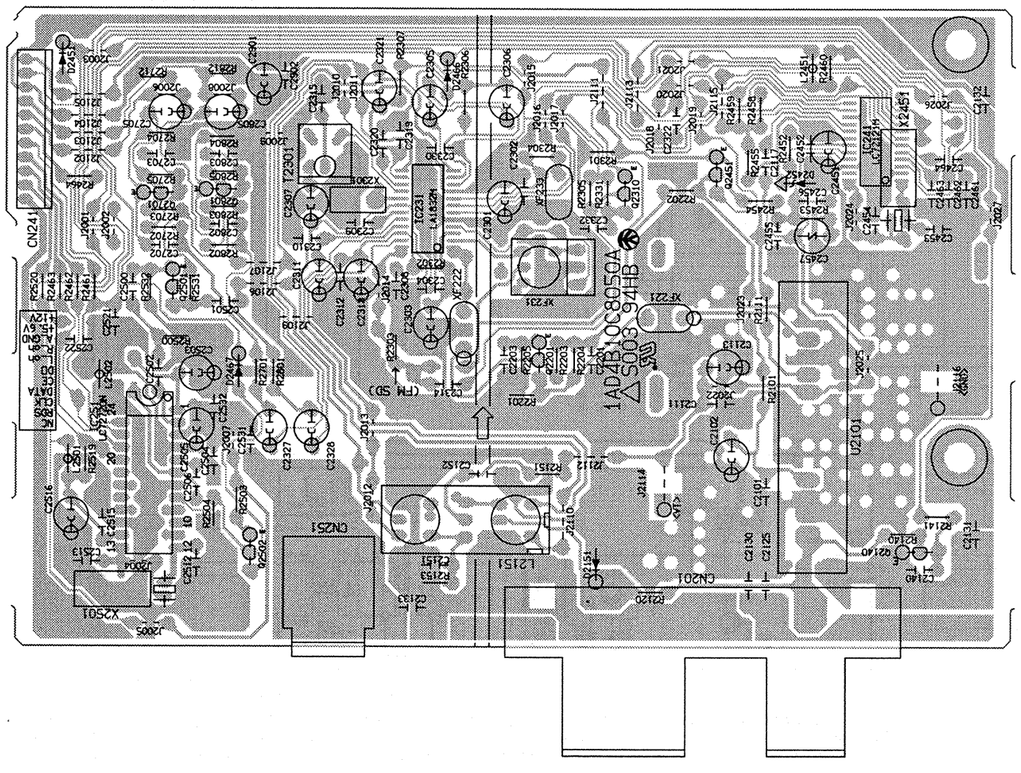
SCHEMATIC DIAGRAM (TUNER)


TUNER SECTION
U2101
ANT NC GND +B VT OSC GND IF
CN201
ANT. TERMINAL
FM 75ohm
AM LOOP
IC231 LA1832M
FM IF AM MIX REG AM IF GND SD ST FM DET VDD MUTE FM/AM
OSC BU AM OSC AFC AM RF AGC L CUT DET OUT VCO MPX IN RCH LCH MONO
IC241 LC72121M
XOUT NC VSSA AOUT AIN PD VDD FMIN AMIN VSSD SD IFIN
XIN VSSX CE DI CLK DO FM MONO AM IF_REQ DIST NC
IC251 LC72720N
XOUT T5 T4 T3 T2 T1 CIN FLOUT Vaaa Vdda MPXIN VREF
XIN Vddd Vaad T6 T7 SYNC RDS-IN DO CL DI CE SYR
CN241
11 +12V
10 +5.6V
9 A-GND
8 R-CH
7 L-CH
6 TU_DO
5 TU_CE
4 TU_DATA
3 TU_CLK
2 RDS
1 D-GND(NC)
(TO PREAMP)
VOLTAGE= FM 98MHZ / AM 999KHZ (UNIT:V)

This is a basic schematic diagram

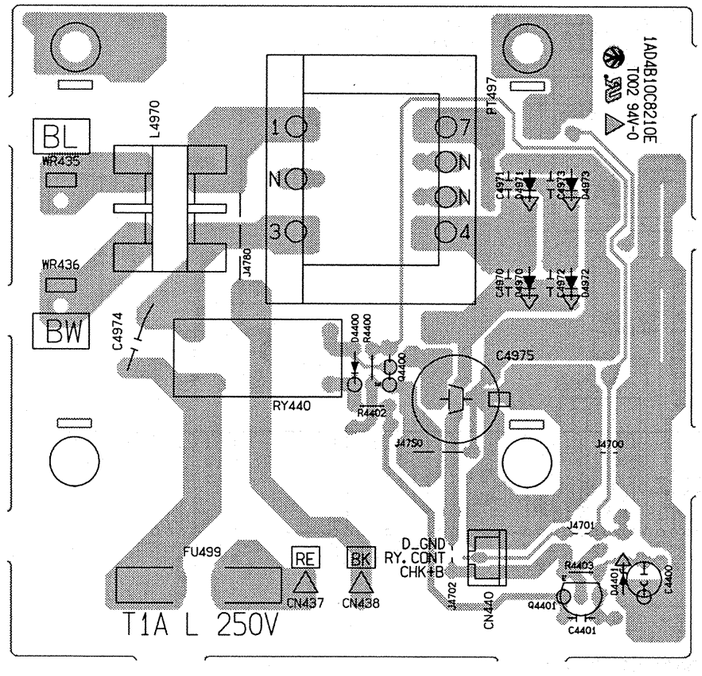


PREAMP P.W.B

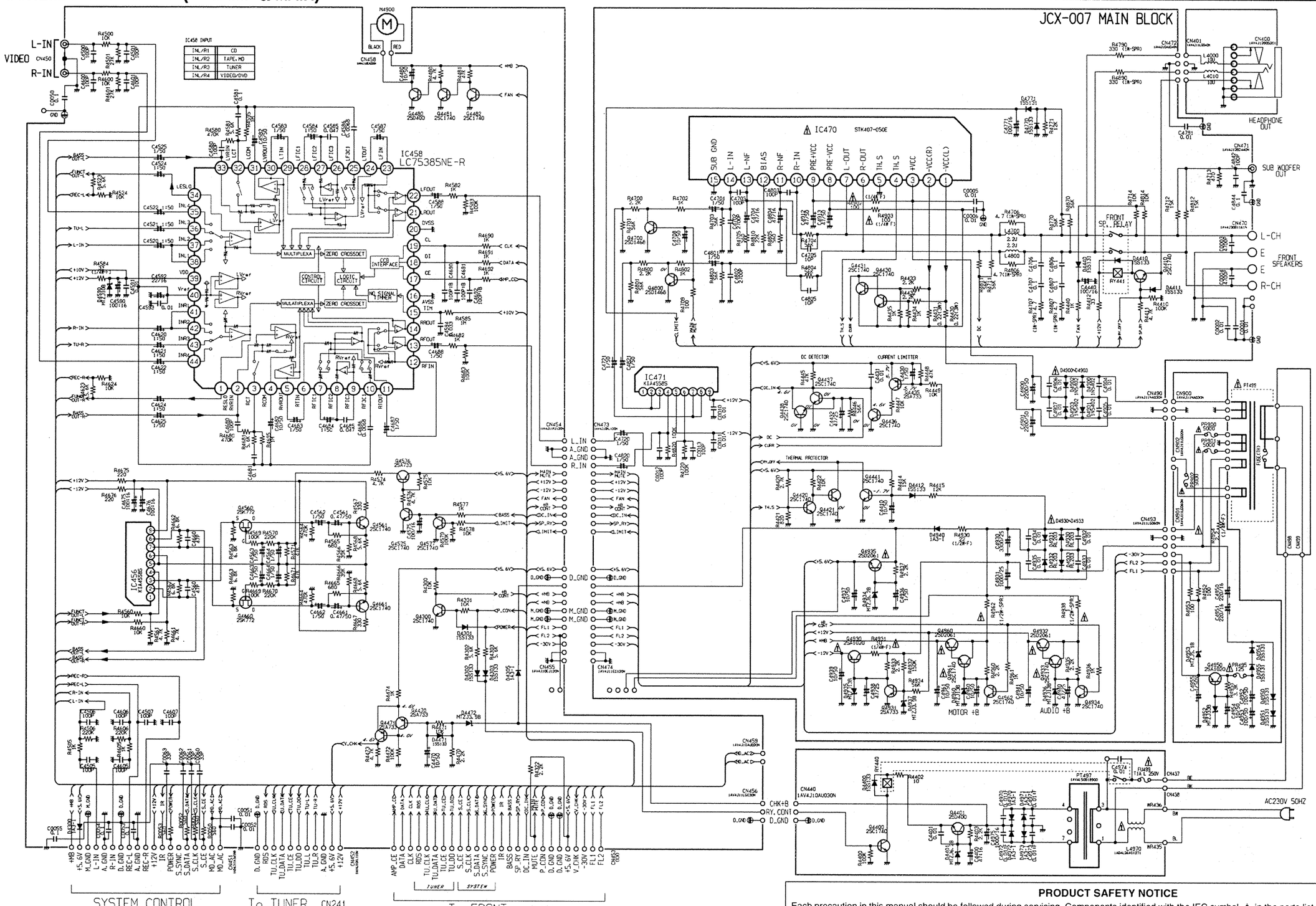


TUNER P.W.B

SUB POWER TRANSFORMER P.W.B



SCHEMATIC DIAGRAM (PREAMP & MAIN)

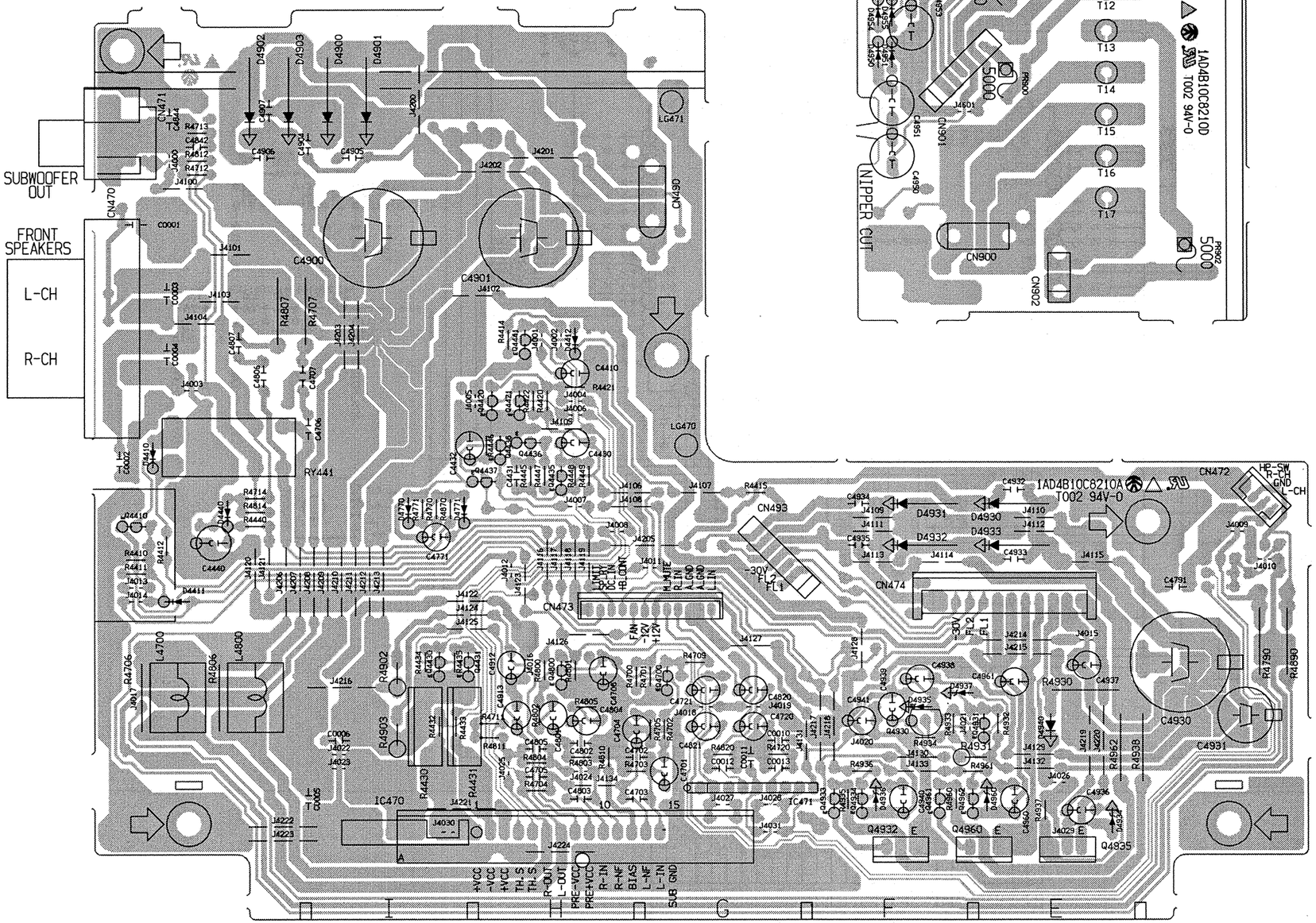


This is a basic schematic diagram

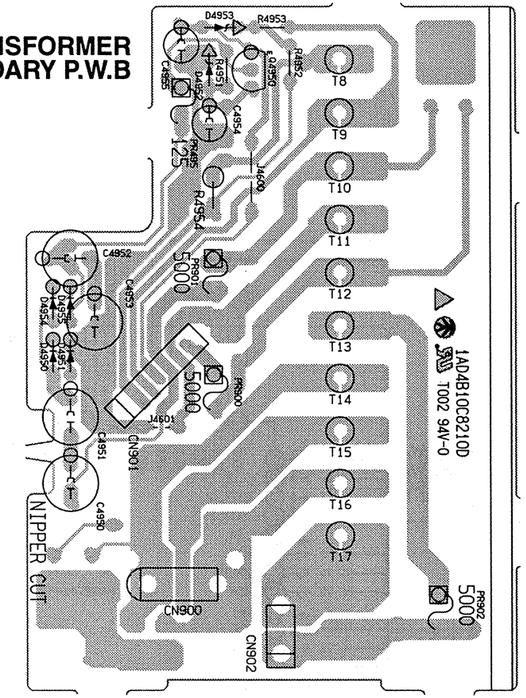
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by ⚠ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

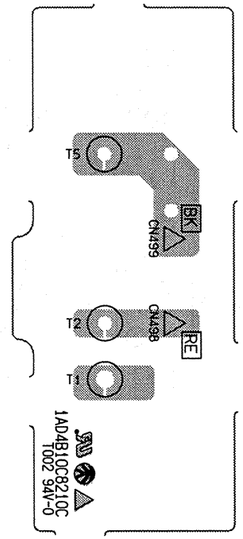
MAIN P.W.B

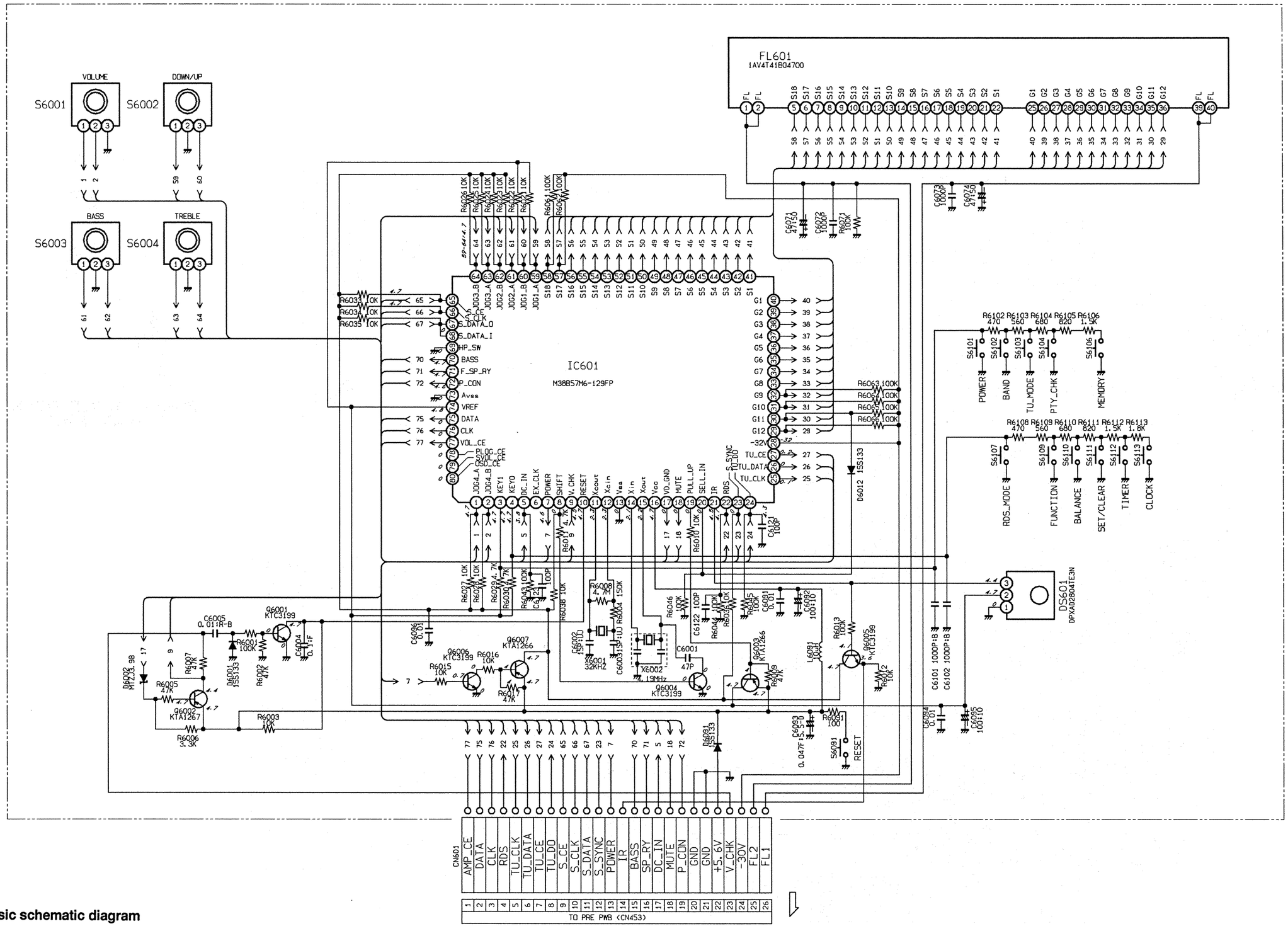


POWER TRANSFORMER SECONDARY P.W.B



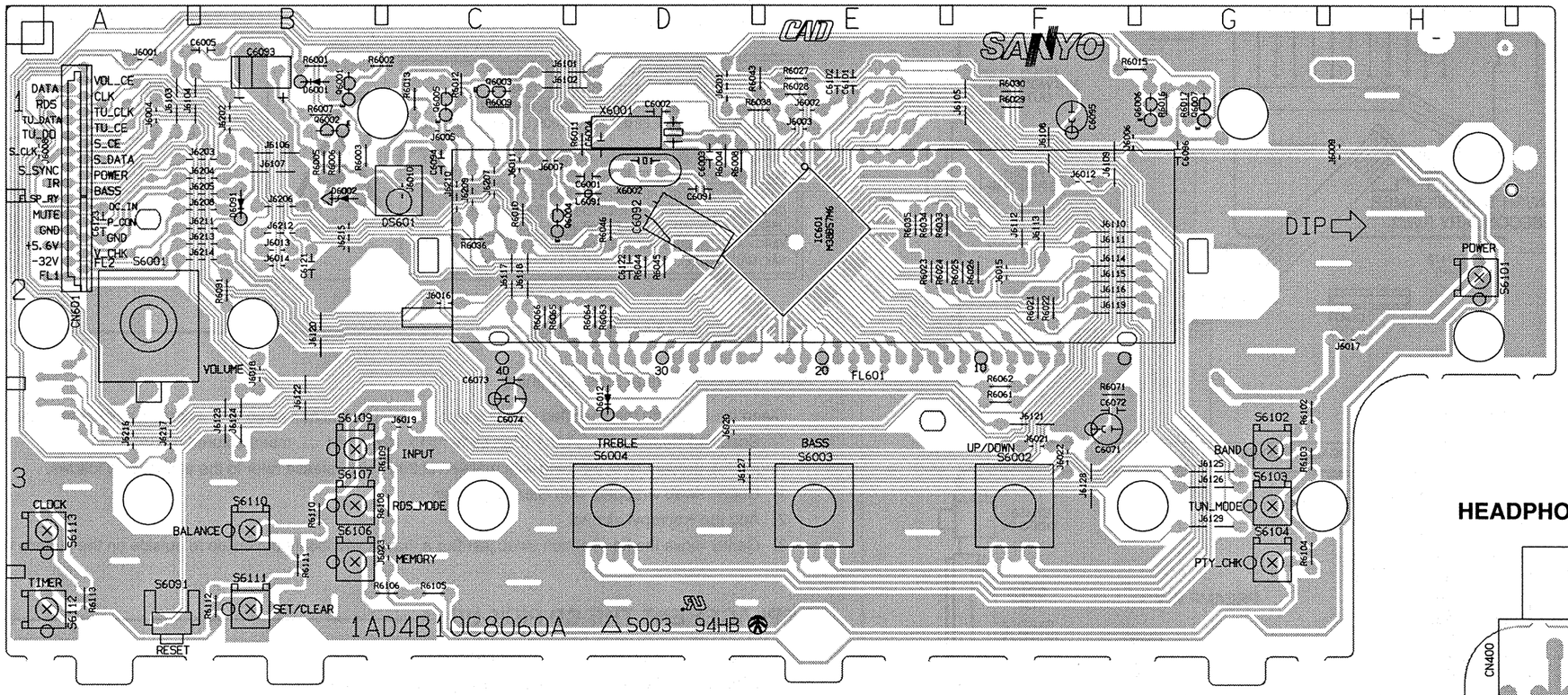
POWER TRANSFORMER PRIMARY P.W.B



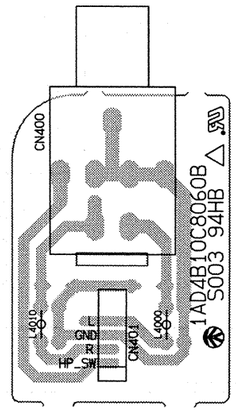


This is a basic schematic diagram

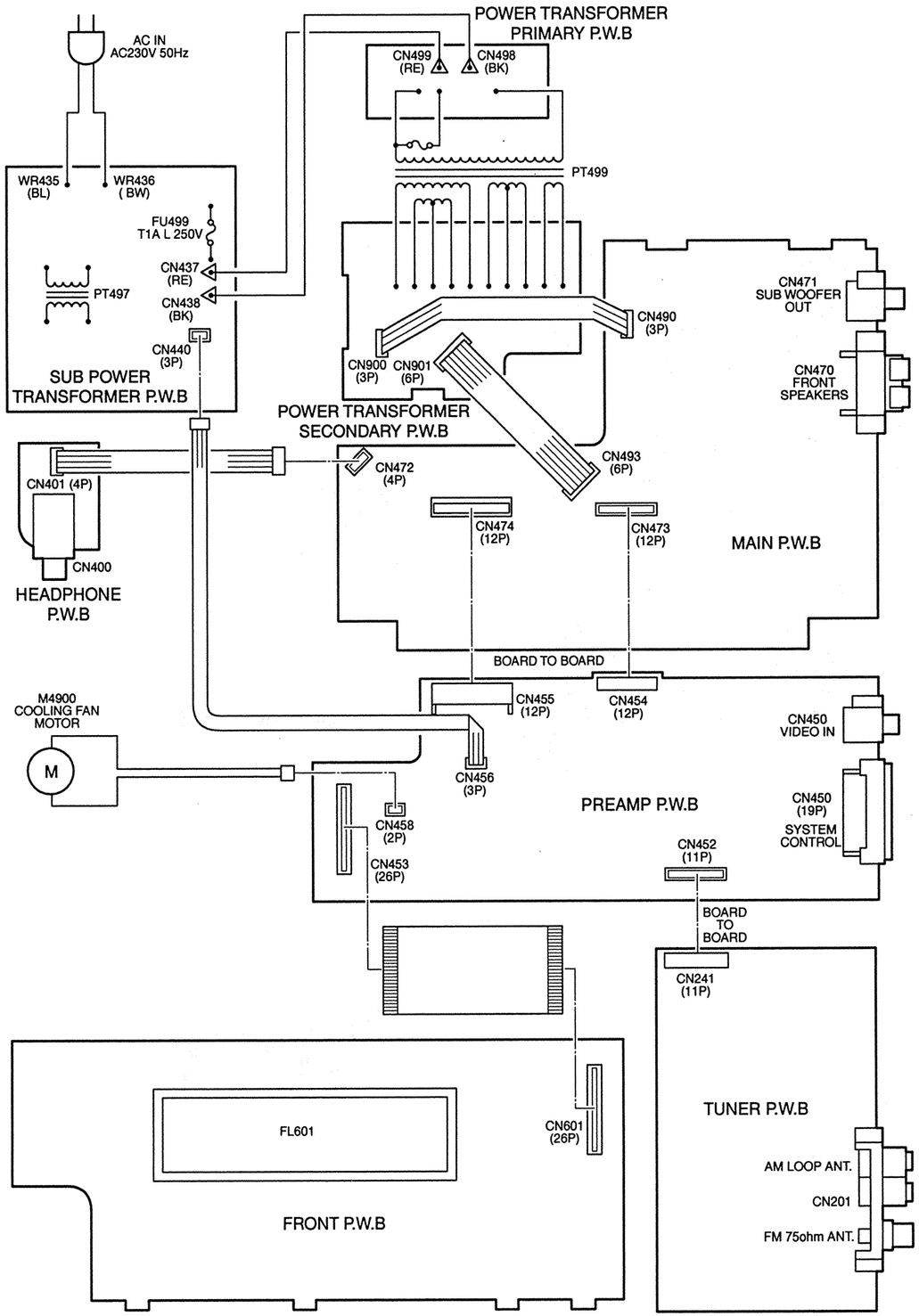
FRONT P.W.B



HEADPHONE P.W.B



WIRING CONNECTION



CD CHANGER SECTION

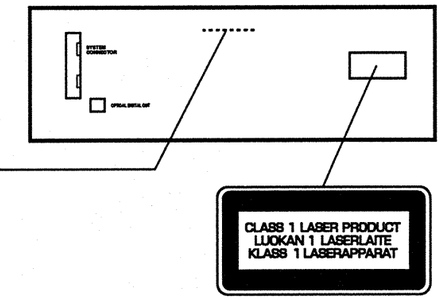
LASER BAEM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

CAUTION :
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE

LASER OUTPUT ..... 0.6 mW Max. (CW)
WAVELENGTH ..... 790 nm

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.



CD PICK-UP MAINTENANCE

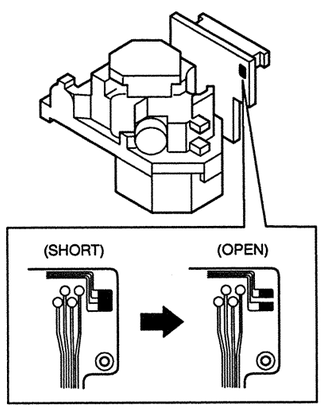
About pick-up (Optical lens) Cleaning

Clean the lens with the specified cleaning disc or moisten a cotton swab with isopropyl alcohol and cleaning paper.
Specified cleaning disc : LC-1 (Part code : 645 026 1961 ..... manufactured by SANYO.)
Regarding procedure of cleaning with moisten cotton swab, please refer to the attached as follows.

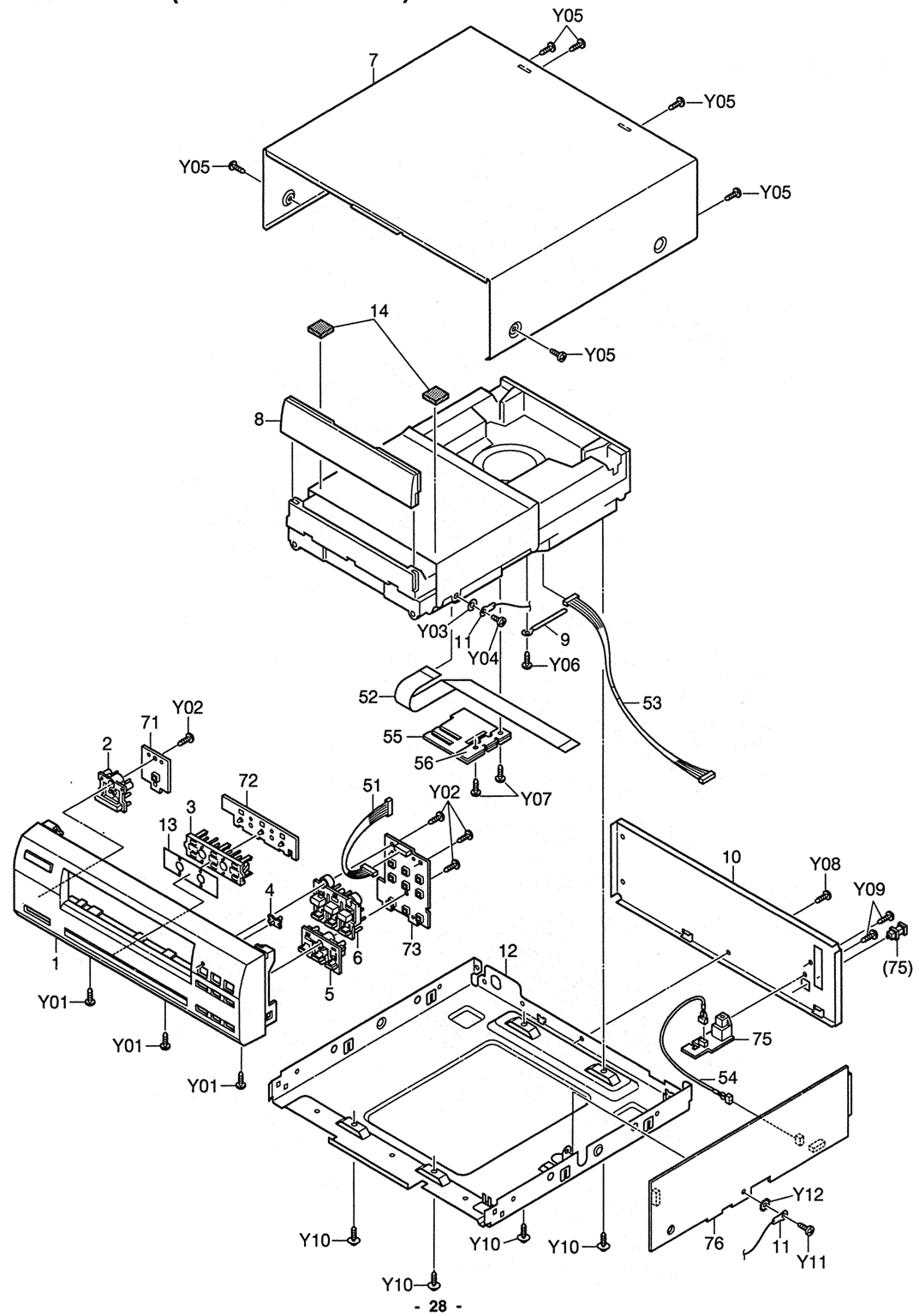
1. Cotton swab wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

REPLACEMENT THE CD PICK-UP

1. Insert the pick-up rail into the base chassis.
2. If the rack of the base chassis are missing when the pick-up rail have been installed, first wipe the tips of the rail with alcohol.
3. After the pick-up has been replaced, apply grease **(FLOIL G-474B)**.
4. The pick-up P.W.Board pattern is **"shorted"**, as shown in the figure, so that the new pick-up will not be susceptible to the effects of static.
5. Set the pattern to **"open"** after the pick-up has been replaced.



EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 µF type of Ceramic type and Electrical type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 302 5276	CARTON CASE,INNER SLEEVE
	614 302 0752	CUSHION,FRONT,FRONT
	614 302 0769	CUSHION,BACK,BACK
	645 036 4334	POLY SHEET-0750X0400*NC,SET (UK)
	645 036 4341	POLY SHEET-0750X0400*NC,SET (UK)
	614 304 7773	ASSY,BOX,SPEAKER (L) (UK)
	614 304 7797	ASSY,BOX,SPEAKER (L) (XE)
	614 304 7780	ASSY,BOX,SPEAKER (R) (UK)
	614 304 7803	ASSY,BOX,SPEAKER (R) (XE)
	614 304 5281	ASSY,GRILLE

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 302 4767	ASSY,CABINET,FRONT
2	614 302 0349	BUTTON,OPEN,OPEN/CLOSE
3	614 302 0622	REFLECTOR,DISC SEL,DISC SELECT
4	614 302 0530	DEC,WINDOW LED,PLAY
5	614 302 0363	BUTTON,SEL,DISC SELECT
6	614 302 0356	BUTTON,PLAY,PLAY/PAUSE
7	614 304 7834	ASSY,CABINET,AFTER BENDING
8	614 302 0523	DEC,ESCUTCHEON,DISC TRAY
9	614 130 0382	LUG,CD MECHA LEAD DRESS
10	614 302 0592	PANEL,REAR (UK)
10	614 303 9600	PANEL,REAR (XE)
11	614 129 9082	LUG,FOR CD-MECHA WIRE
12	614 302 4798	ASSY,CABINET,BOTTOM
13	614 302 0554	DEC,SHEET,DISC SEL,DISC SELECT
14	614 250 6721	FOOT,W/DOU CD MECHA
	614 274 8190	LABEL,SAFETY,LASER

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 021 3503	SCR S-TPG BIN 3X10, FRONT-BOTTOM FIX
Y02	411 021 3503	SCR S-TPG BIN 3X10,FRONT PWB FIX
Y03	411 092 2900	WASHER Z 3X10X1,MECHA
Y04	411 028 9201	SCR S-TPG PAN 3X4,MECHA
Y05	411 021 3701	SCR S-TPG BIN 3X10,CABINET
Y06	411 021 3503	SCR S-TPG BIN 3X10,LUG
Y07	411 021 3503	SCR S-TPG BIN 3X10, LEAD DRESS PWB
Y08	411 021 3701	SCR S-TPG BIN 3X10,BOTTOM-REAR
Y09	411 021 3701	SCR S-TPG BIN 3X10, REAR-ELECT PART
Y10	411 020 9902	SCR S-TPG BRZ+FLG 3X8,CD MECHA
Y11	411 021 3503	SCR S-TPG BIN 3X10,SIDE PWB
Y12	411 008 0402	WASHER OUT TW 3,SIDE PWB

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	614 305 2821	ASSY,WIRE,CD-FRONT
52	645 037 0359	FLEXIBLE FLAT CABLE,PICK UP
53	614 305 2647	ASSY,WIRE,CD-MECHA
54	614 305 2838	ASSY,WIRE,CD-DOUT
55	614 302 4644	PWB,FFC
56	⚠ 614 304 7995	PWB,FFC2
CN181	645 037 0359	FLEXIBLE FLAT CABLE, PICK-UP
CN182	614 305 2647	ASSY,WIRE,CD-MECHA 6P
CN183	614 305 2821	ASSY,WIRE,CD-FRONT 7P
CN184	614 305 2838	ASSY,WIRE,CD-DOUT 3P

OPEN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 302 4170	ASSY,PWB,OPEN (Only Initial)
CN164	614 035 4911	SOCKET,DIP 2P
or	614 237 9752	SOCKET
S1640	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT

LED P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 302 4163	ASSY,PWB,LED (Only Initial)
CN162	614 035 4959	SOCKET,DIP 6P
CN163	614 035 4911	SOCKET,DIP 2P
or	614 237 9752	SOCKET
D1620	408 032 5404	LED SLP-9118C-51H-S-T1,FORLED_RED
D1621	408 032 5404	LED SLP-9118C-51H-S-T1,FORLED_RED
D1622	408 032 5404	LED SLP-9118C-51H-S-T1,FORLED_RED

KEY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 302 4156	ASSY,PWB,KEY (Only Initial)
CN160	645 006 0861	PLUG,7P
CN161	614 035 4959	SOCKET,DIP 6P
D1601	408 037 4204	LED SLP-3118B-51HAB-T1, FOR_LED_YG
S1601	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1602	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1603	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1604	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1605	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
or	614 240 1002	SWITCH,TACT
S1606	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1607	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1608	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S1609	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT

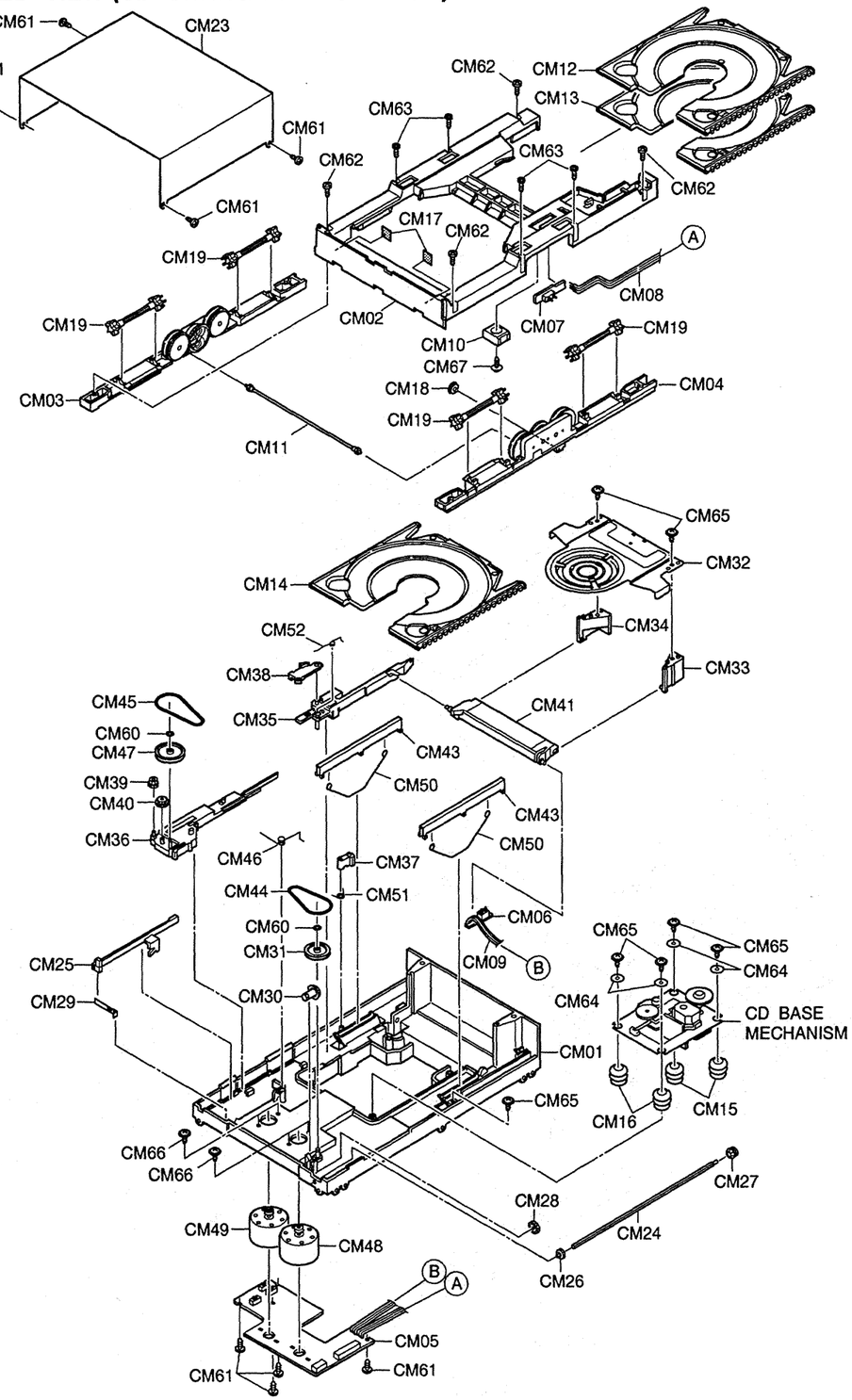
DIGITAL OUT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 302 4187	ASSY,PWB, DIGITAL-OUT (Only Initial)
CN165	645 005 7373	PLUG,3P
or	645 007 0068	PLUG,3P
S1650	614 240 5703	OPTO CONNECTOR

CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 302 4149	ASSY,PWB,CD (Only Initial)
CN111	645 033 8168	SOCKET,FPC 16P,CD_PICKUP
CN113	645 005 8127	PLUG,6P,BASEMECHA
CN114	614 020 6562	SOCKET,4P
or	614 223 9223	SOCKET
CN115	614 020 6609	SOCKET,8P
CN116	614 305 2623	ASSY,WIRE,CD_MECHA
CN117	614 305 2630	ASSY,WIRE,CD_MECHA
CN190	645 006 0861	PLUG,7P
CN198	645 005 7373	PLUG,3P
or	645 007 0068	PLUG,3P
CN199	614 239 5455	SOCKET,FORSYSTEM
D1211	407 063 9108	ZENER DIODE MTZJ6.8B
D1221	407 099 5303	ZENER DIODE MTZJ5.6B
D1480	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1491	407 099 5204	ZENER DIODE MTZJ5.1B
D1492	⚠407 148 6701	DIODE 1A3-I
D1493	⚠407 148 6701	DIODE 1A3-I
D1494	⚠407 148 6701	DIODE 1A3-I
D1495	⚠407 148 6701	DIODE 1A3-I
D1496	⚠407 148 6701	DIODE 1A3-I
D1901	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1902	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
IC101	409 378 8104	IC LA9240ML
IC102	409 435 2106	IC LC78622NE
IC103	⚠ 409 372 9602	IC LA6541
IC131	⚠ 409 441 4507	IC TA7291S(M)
IC132	⚠ 409 441 4507	IC TA7291S(M)
IC190	410 341 8809	IC M38504M6-203FP,MICON
L1451	645 001 4550	INDUCTOR,10U K
L1771	614 212 3171	INDUCTOR,FERITE
or	645 006 9864	INDUCTOR,80U
L1781	614 212 3171	INDUCTOR,FERITE
or	645 006 9864	INDUCTOR,80U
LUG01	645 023 8987	FIXER
Q1301	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
or	405 008 6809	TR 2SB808-F-SPA
Q1401	⚠405 141 3604	TR KTA1273-Y
or	⚠405 009 5207	TR 2SB927-S
or	⚠405 001 9302	TR 2SA1020-Y
Q1771	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1772	405 149 6003	TR 2SJ498,FET_FOR_A_SW
Q1773	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
Q1781	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1782	405 149 6003	TR 2SJ498,FET_FOR_A_SW
Q1783	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
Q1901	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1902	405 006 1905	TR 2SA933S-S
or	405 006 1806	TR 2SA933S-R
or	405 004 4601	TR 2SA608-F-SPA
or	405 004 5103	TR 2SA608-G-SPA
or	405 143 6504	TR KTA1267-GR
Q1903	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
R1211	⚠402 082 0709	RESISTOR 5.6 J- 2W
or	⚠402 072 0207	RESISTOR 5.6 J- 2W
R1221	⚠402 082 0709	RESISTOR 5.6 J- 2W
or	⚠402 072 0207	RESISTOR 5.6 J- 2W
T1001	407 212 0505	THERMISTOR RXE065
X1451	645 020 9024	OSC,CRYSTAL 16.9344MHZ
X1900	645 018 6103	OSC,CERAMIC 6.000MHZ

EXPLODED VIEW (CD CHANGER MECHANISM)



PARTS LIST

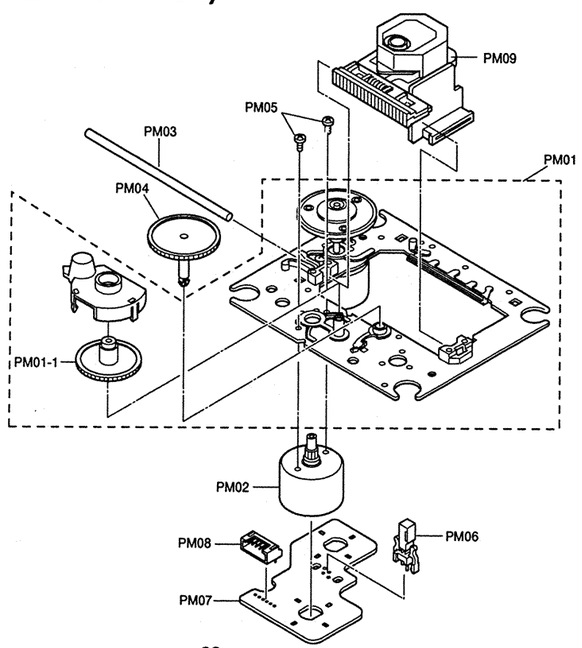
CD CHANGER MECHANISM (PM-CDC10TP-SH ... Only Initial)

REF.NO.	PART NO.	DESCRIPTION
CM01	645 033 6072	ASSY,CHASSIS
CM02	645 033 7512	DRAWER 2
CM03	645 033 5976	ASSY,HOLDER L,DRAWER
CM04	645 033 6898	ASSY,HOLDER R3B,DRAWER
CM05	645 033 6041	ASSY,PC BOARD A
CM06	645 033 6065	ASSY,PC BOARD B
CM07	645 033 6058	ASSY,PC BOARD C
CM08	645 033 5945	LEAD WIRE
CM09	645 033 5952	LEAD WIRE
CM10	645 033 6713	SPACER SW
CM11	645 033 6027	ASSY,GEAR DRIVE,SINCHRO
CM12	645 033 6904	ASSY,CRG 100,CARRIAGE NO.1
CM13	645 033 6911	ASSY,CRG 200
CM14	645 033 6928	ASSY,CRG 300
CM15	645 033 5877	INSULATER
CM16	645 033 5884	INSULATER
CM17	645 033 5907	CUSHION
CM18	645 033 6324	BEVEL GEAR 4
CM19	645 033 5990	ASSY,GEAR STAR,CARRIAGE LIFT
CM23	645 033 6089	COVER 2
CM24	645 033 6539	SHAFT
CM25	645 033 6461	SLIDER 4
CM26	645 033 6201	GEAR SPLINE
CM27	645 033 6232	BEVEL GEAR 1
CM28	645 033 6270	GEAR IDLER 1
CM29	645 033 6102	PLATE SPRING
CM30	645 033 6287	BEVEL GEAR 3
CM31	645 033 6225	PULLEY C
CM32	645 033 6034	ASSY,CLAMPER
CM33	645 033 6140	ARM SLIDER R
CM34	645 033 6157	ARM SLIDER L
CM35	645 033 6430	SLIDER 1
CM36	645 033 5969	ASSY,SLIDER 2,FWD/RVS
CM37	645 033 6980	ARM STOPPER A2
CM38	645 033 6416	ARM STOPPER B
CM39	645 033 6263	GEAR IDLER A2
CM40	645 033 6218	GEAR IDLER C
CM41	645 033 6447	LEVER
CM43	645 033 6454	LIFTER,CARRIGE LIFT UP
CM44	645 033 5778	BELT
CM45	645 033 5785	BELT
CM46	645 033 7048	SPRING
CM47	645 033 6393	PULLEY A
CM48	645 033 6003	ASSY,MOTOR CARRIGE
CM49	645 033 6010	ASSY,MOTOR DRAWER
CM50	645 033 5723	SPRING
CM51	614 303 7545	SPRING
CM52	645 033 5747	SPRING
CM60	645 033 5648	WASHER
CM61	645 033 5594	SCREW
CM62	645 033 7031	SCREW
CM63	645 033 5563	SCREW
CM64	645 033 5631	WASHER
CM65	645 033 5570	SCREW
CM66	645 033 5600	SCREW
CM67	645 033 5617	SCREW

CD BASE MECHANISM (CD213CCM-SNSH ... Only Initial)

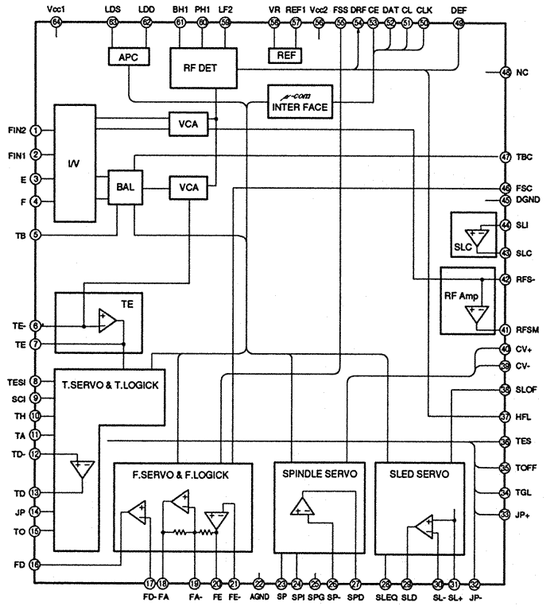
REF.NO.	PART NO.	DESCRIPTION
PM01	645 033 6751	ASSY,MOTOR CHASSIS,BASE
PM01-1	645 033 6812	GEAR B RP,SLED GEAR
PM02	645 033 6744	ASSY,MOTOR GEAR,SLED
PM03	645 033 6805	SLED SHAFT,PICK RAIL
PM04	645 033 6799	GEAR A S,PICK DRIVE GEAR
PM05	645 033 6829	SCREW+P2*3,SLED MOTOR FIX
PM06	645 033 6775	LEAF SWITCH,LIMIT SWITCH
PM07	645 033 6782	MOTOR 6P S PWB
PM08	645 033 6768	CONNECTOR PIN 6P
PM09	614 303 5626	PICK UP

EXPLODED VIEW (CD BASE MECHANISM)



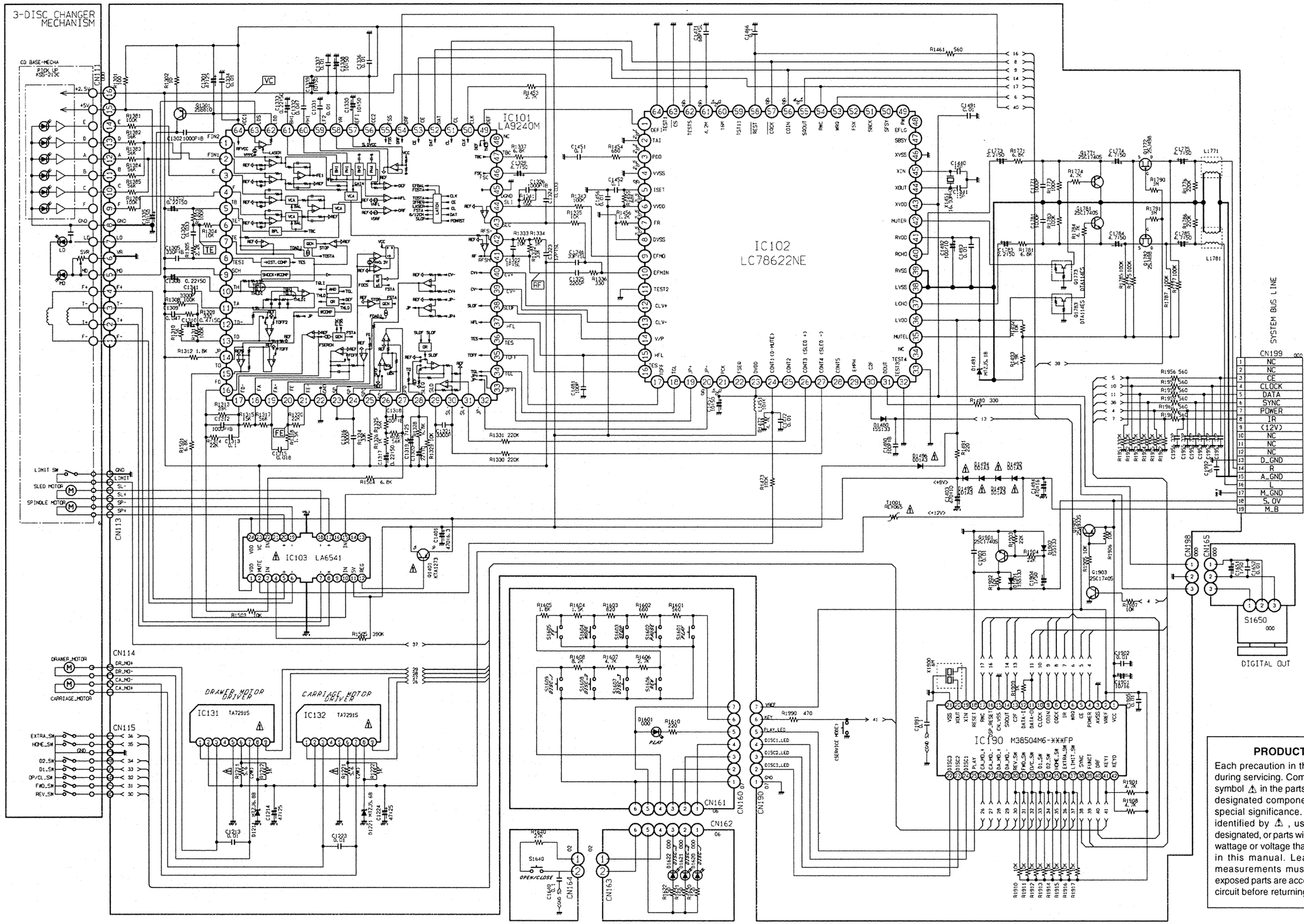
IC BLOCK DIAGRAM & DESCRIPTION

IC101 LA9240ML (Servo Signal Processor)



No.	Pin Name	I/O	Function
1	FIN2	I	Connection Pin for Photo Diode of Pickup.
2	FIN1	I	FIN2 + FIN1 = RF, FIN2 - FIN1 = FE
3	E	I	Connection Pin for Photo Diode of Pickup.
4	F	I	E - F = TE
5	TB	I	Input Pin for DC ingredient of TE Signal.
6	TE-	I	Connection Pin for Gain Setting Resistor of TE Signal to TE Signal Pin.
7	TE	O	Output Pin for Tracking Error Signal.
8	TESI	I	Input Pin for Track Error Sense Comparator. TE Signal through Band Pass, and Inputted.
9	SCI	I	Input Pin for Shock Detection.
10	TH	I	Connection Pin for Time Constant Setting of Tracking Gain.
11	TA	O	Output Pin for TA Amplifier.
12	TD-	I	Connection Pin for Constant Tracking Phase Compensation, Consist of between TD and VR.
13	TD	I	Connection Pin for Constant of Tracking Phase Compensation.
14	JP	I	Connection Pin for Amplitude Setting of Tracking Jump (Kick Pulse) Signal.
15	TO	O	Output Pin for Tracking Control Signal.
16	FD	O	Output Pin for Focusing Control Signal.
17	FD-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD and FA.
18	FA+	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD- and FA-.
19	FA-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FA and FE.
20	FE	O	Output Pin for Focusing Error Signal.
21	FE-	I	Connection Pin for Gain Setting Resistor of FE Signal to FE Signal Pin.
22	AGND	-	Ground for Analog Signal.
23	SP	O	Output Pin for Single End of Input Signal of the CV+, CV- Pin.
24	SPI	I	Input Pin for Spindle Amplifier.
25	SPG	I	Connection Pin for Gain Setting Resistor, when Spindle 12 cm Mode.
26	SP-	I	Connection Pin for Constant of Spindle Phase Compensation with SPD Pin.
27	SPD	O	Output Pin for Spindle Control Signal.
28	SLEQ	I	Connection Pin for Constant of Sled Phase Compensation.
29	SLD	O	Output Pin for Sled Control Signal.
30	SL-	I	Input Pin for Sled Signal from Micro Processor.
31	SL+	I	
32	JP-	I	Input Pin for Tracking Jump Signal from Digital
33	JP+	I	Signal Processor.
34	TGL	I	Input Pin for Tracking Gain Control Signal from Digital Signal Processor. TGL = H : Gain Low
35	TOFF	I	Input Pin for Tracking Off Control Signal from Digital Signal Processor. TOFF = H : OFF
36	TES	O	Output Pin for Track Error Sense Signal to Digital Signal Processor.
37	HFL	I	High Frequency Level Signal Use Detection Main-Beam Position is on the pit or mirror.
38	SLOF	I	Input Pin for Sled Servo Off Control.
39	CV-	I	Input Pin for Constant Linear Velocity Error
40	CV+	I	Signal from Digital Signal Processor.
41	RFSM	O	Output Pin for RF Signal.
42	RFS-	I	Connection Pin for Gain Setting of RF and Constant Setting of 3T Compensation of the EFM Signal with RFSM Pin.
43	SLC	O	Slice Level Control Signal is Output Pin. It Control Level of Data-Slice by Digital Signal Processor of the RF Waveform.
44	SLI	I	Input Pin for Level Control of Data-Slice by Digital Signal Processor.
45	DGND	-	Ground for Digital Signal.
46	FSC	O	Output Pin for Focus Search Smooth Condenser
47	TBC	O	Connection Pin for Variable Range Setting of EF Balance.
48	NC	-	No Connect
49	DEF	O	Output Pin for Defect Detection of Disc.
50	CLK	I	Input Pin for Reference Clock Pulse. (4.23 MHz of Digital Signal Processor)
51	CL	I	Input Pin of Clock Pulse for Command from Micro Processor.
52	DAT	I	Input Pin of Data for Command from Micro Processor.
53	CE	I	Input Pin of Chip Enable for Command from Micro Processor.
54	DRF	O	Output Pin for Detect of RF Level.
55	FSS	I	Select Pin for Focus Search Mode
56	VCC2	-	VCC for Servo and Digital Root.
57	REFI	I	Bus Control Connection Pin for Reference Voltage.
58	VR	O	Output Pin for Reference Voltage.
59	LF2	I	Connection Pin for Time Constant Setting of Detect Detection of the Disc.
60	PH1	I	Capacitor Connection Pin for Peak-hold of RF Signal.
61	BH1	I	Capacitor Connection Pin for Bottom-hold of RF Signal.
62	LDD	O	Output Pin of APC (Automatic Power Control) Circuit.
63	LDS	I	Input Pin of APC (Automatic Power Control) Circuit.
64	VCC1	I	VCC for RF Root.

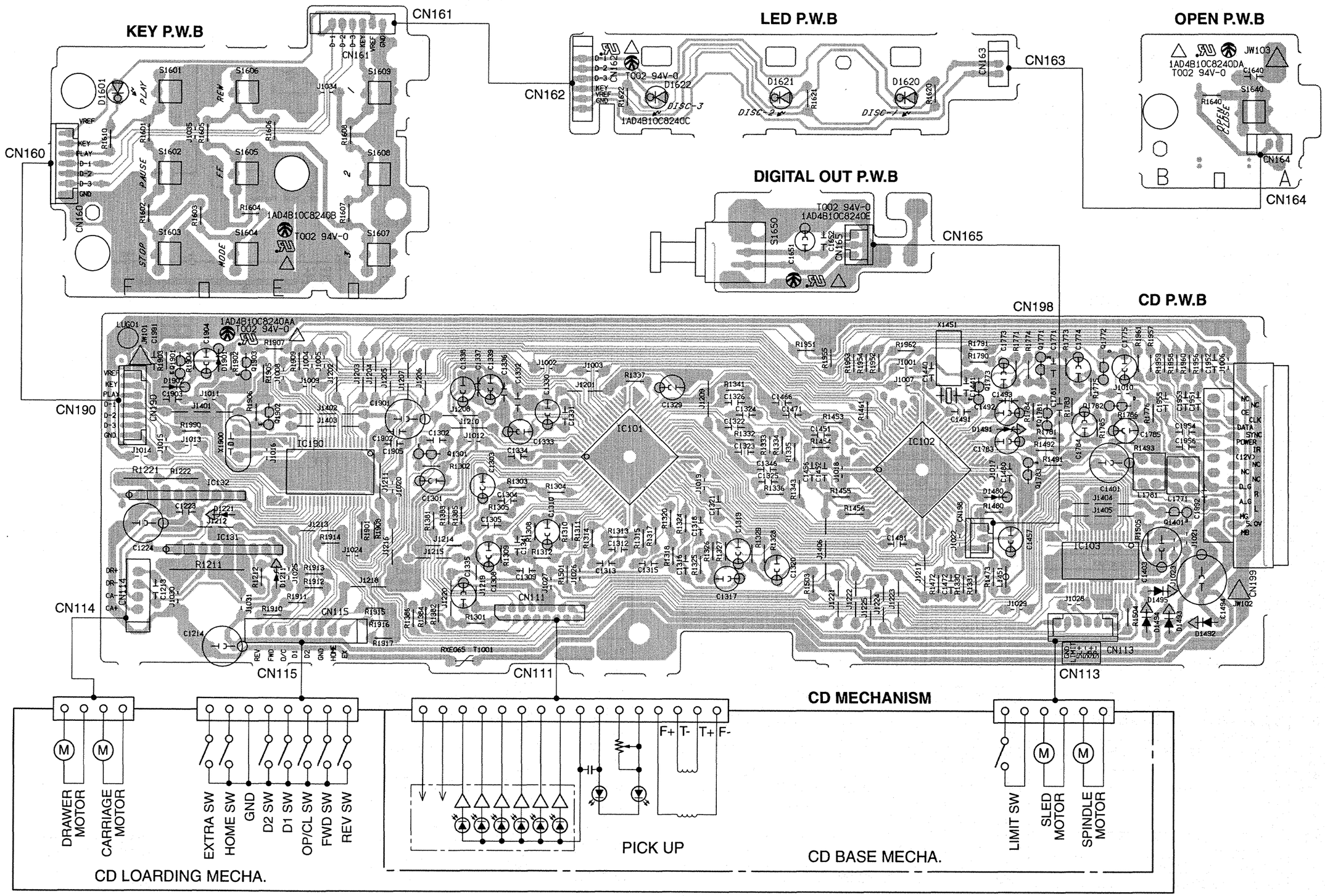
SCHEMATIC DIAGRAM (CD)



PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by ⚠ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

This is a basic schematic diagram


KEY P.W.B
LED P.W.B
OPEN P.W.B
DIGITAL OUT P.W.B
CD P.W.B
CN160
CN161
CN162
CN163
CN164
CN165
CN198
CN190
CN114
CN115
CN111
CN113
1AD4B10C8240B
1AD4B10C8240C
1AD4B10C8240DA
1AD4B10C8240AA
T002 94V-0
IC101
IC102
IC103
IC130
IC131
IC132
CD MECHANISM
DRAWER MOTOR
CARRIAGE MOTOR
EXTRA SW
HOME SW
GND
D2 SW
D1 SW
OP/CL SW
FWD SW
REV SW
PICK UP
F+ T- T+ F-
LIMIT SW
SLED MOTOR
SPINDLE MOTOR
CD LOARDING MECHA.
CD BASE MECHA.